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DEDICATED

TO THE MEMORY

OF

MY LATE WIFE

Foreword

I have been honoured with the request to write a short foreword to this succinct and elegant survey of India's economic progress. The author has presented the broad features of development in agriculture and irrigation, in rural finance, tenancy and industrial production. He is both accurate, and discriminative in the use of his sources and materials, and has never permitted the details of the stages to obscure the broad-march of economic development. The book, however, is not merely economic history. It also enters systematically into the present features of the economic situation and pleads for a correction of defects and distortions in each sector of economic life.

The conviction has gained ground in the country that Indian agriculture will have to fight an increasingly severe and even a losing battle in the face of an increasing population due to deforestation and erosion and the limits already reached in the domain of irrigation. The difficulties of the agricultural situation are aggravated by agricultural indebtedness and the laws of inheritance. A rapid industrialisation, such as the author pleads for, on the basis of a study of the recent tariff policy, can alone meet the situation.

Towards the end of the eighteenth century India exported muslins, which alone amounted to 79,000 bales valued at about 30 lacs of rupees. The total annual export of cotton goods from India has been estimated at about 50 millions of sq. yards. India's cloth market extended from Indo-China and Moluccas in the East to South and East Africa, Egypt and Europe in the West; and from Central Asia in the North to the islands of the Indian Ocean in the South. Her industrial and commercial hegemony which enabled her to become the sink of the world's gold and silver is one of the outstanding facts in the world's economic history. But economic

history, like political history, has its ebb and flow, and today we have not merely lost our industrial supremacy but we have become industrially dependent and are now being even de-industrialised, the proportion of the population engaged in industries to the total population showing a decrease in the recent decades. The author has made out an excellent case for the development of organised industries. Besides restoring the economic balance industrialisation promotes progress-mindedness in the people, and without progress-mindedness there cannot be discoveries and inventions, which once gave to India's technical arts their worldwide celebrity.

Prof. Srivastava's book will be useful not only for graduate and post-graduate students in Economics and Commerce but also for the general reader interested in India's social and economic advance. I commend it for their careful and profitable reading.

University of Lucknow.

Radha Kamal Mukerjee

PREFACE

The present volume was taken in hand last year with a view to provide a suitable and comprehensive text-book for the students of the B. Com. and M. A. (in Economics) of the Universities in U. P. in Modern Economic Development of India and England.

During the last twelve years of my teaching the subject to the B. Com. classes I have very sorely felt the want of a suitable text-book which can offer to the students in a limited compass a comprehensive survey of the Economic Development of England and India on a comparative basis and make the subject interesting and intelligible. Undoubtedly there are a few first class volumes for the different periods of Economic History of England and even for the whole of it, and recently some outstanding volumes on the Economic Development of India have also appeared. Still, the teachers and the students of the subject have to hunt up, collect, sift and rearrange matter in a form to suit their purposes of teaching and examination. I have made every effort to keep in view the need of the average student and have tried to present the subject-matter in an attractive, comprehensive and intelligible style.

Changes in economic conditions of the various countries in the world are moving so fast that it is difficult for the average human mind to adjust itself to them. While the book was in the press, the present titanic struggle between Germany and the Allies was in full swing, and the world was staggered with the sad news of the sudden collapse

of once proud France. This unprecedented mechanised warfare has switched on industry, trade, transport, finance, taxation, currency, credit and prices—in fact the whole fibre of economic organisation—from a peace time to a war economy. India, although so far away, from the active theatre of war, has become the arsenal of the struggling democracies against the savage and inhuman Fascist hordes. Her industrial organisation and trade in particular have undergone a profound and radical change. The cutting off of imports of various manufactures from the continent of Europe and England has provided, as in the Great War, a splendid opportunity to Indian industrialists. Indian industries, with the notable exception of sugar, have received a tremendous fillip in response to the appeal and policy of a progressively intensified war effort of the Government of India for a successful prosecution of the war to a victorious end. I have made every effort to make the subject-matter as upto-date as was possible and have incorporated the changes introduced so far in the leading industries and industrial-policy of the Government. The findings and recommendations of the National Planning Committee have also been dealt with in their proper places. Let us hope that this new policy will survive the war and enable the country to place herself on a sound footing in the manufacture of essential commodities.

The present volume deals with the various problems of Indian agriculture, famine, rural finance, indebtedness, co-operation and up-lift; and with the cottage and organised industries. I have incorporated all the epoch-making changes introduced by the short-lived Congress ministries in tenancy and debt legislation and described their laudable efforts for rural uplift and reconstruction.

The book upto the present stage was ready by April but on account of certain inevitable circumstances and engagements, it could not be placed in the market in July. I am intending to complete the full volume very shortly.

I am very grateful to Dr. Radha Kamal Mukerjee for his illuminating foreword to the book which has no doubt enhanced its utility. I am thankful to Prof. K. P. Bhatnagar, the Dean of Faculty of Commerce, Agra University, to Prof. K. S. Bhatnagar of the local S. D. College to Prof. K. L. Govil of the Allahabad University, and to Prof. Baljit Singh, my colleague, for their kind words of encouragement and advice in its preparation. I am confident the book will be found useful both by the teachers and students of the subject and by the general public interested in the economic development of the country.

24th September, 1941,
D. A-V. College,
CAWNPORE

C. P. Srivastava

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CHAPTER I

ECONOMIC FOUNDATIONS IN INDIA

From times immemorial the most important feature of the Indian economic organisation has been, of course, the predominance of agriculture and rural life. Our country is, and has always been, a country of villages. Even today no less than 90% of the population lives in villages and agriculture is its premier industry. The most noteworthy feature of our economic organisation in the ages-goneby therefore was the division of the country into hundreds of thousands of self-sufficient and isolated villages with agriculture as its most important industry. Most of the rural population, even though engaged in an industrial occupation, had agriculture as a subsidiary occupation. This preponderance of agriculture over other occupations caused an unequal distribution of the population between various professions and consequently the predominance of rural over urban population. The village was, therefore, the most important unit differing in size from one part of the country to the other. The economic status of the peasantry on account of the differences in political conditions was not the same in all parts of the country. But generally speaking the condition of the peasants was depressed. There were very few towns which originated either as a pilgrimage or as the seat or capital of a court or king or were commercial depots, situated on the terminus of two or more trade routes. The dominant feature of these towns was their "non-industrial character". True it is, that there were certain industries in every town of some importance but they were all art and luxury industries supported by the demand of the court or the well-to-do classes. But the staple products necessary for the common people were all produced in the village. True

also it is that all these characteristics were found in every country of the world during their corresponding stage of industrial development; but the peculiarity of the Indian village unit was, that inspite of the shocks and convulsions of wars and invasions, it persisted and its constitution had affected the economic development of India in many ways. For example, it was perhaps this peculiarly self-sufficient structure of the village that preserved the civilisation of India through the many invasions and the many vicissitudes of rulers and governments.

The economic life of the country, therefore, centred round the village just like the English manor, the distinguishing features of which, like the manor again, were its economic self-sufficiency, its non-attachment and inaccessibility to the outside world; and the predominance of custom and status instead of contract and competition. The typical village was, as it is even now, a collection of mud-hovels or huts, insanitary, crowded, ill-kept and ill-ventilated, monotonous and cheerless. Like the manor again, it formed the nucleus around which the cultivated holdings with waste and meadows spread out on all sides. Occasionally a few homesteads and farm buildings were noticeable on the holdings. There was no proper plan or layout of roads in the villages. On all sides of the village were to be found the open fields scattered and fragmented. Practically every village had its grove or gardens outside. Unlike the manor, however, the art of agriculture was well developed, the knowledge of fertilisers, rotation of crops, and the anxiety of the cultivator to maintain the fertility of the soil intact by mixed cropping were noticeable everywhere. Every village contained within itself all the requisites of its agricultural and industrial activities. The people of the village mostly comprised three classes—the agriculturists, the artisans and merchants and the village officers. The actual tillers of the soil (proprietors or tenants) cultivated their small, scattered and open fields with the help of their family members and occasionally with hired workers. They provided their own capital from their meagre savings or borrowed it from

the landlord or the *sahukars*. In other words, they were their own managers and organisers and labourers. Agriculture was organised on the principles of subsistence farming and the spare produce was carried on pack animals or carted to the nearest market and was exchanged for such necessities as could not be grown locally or for luxuries that could not be obtained in the village itself. The population was scanty, wants were simple and few. The diet of the majority of the rural population was vegetarian. It is not possible to give an exact idea of the total population of the country as no census was taken by the old kings. The tribe, the caste, the village community and joint family made for stability and corporate life. The individual was completely sacrificed at the altar of the community's interests.

Practically every village contained its regular team of artisans and craftsmen to supply the simple requirements of the village folk. A potter, a carpenter, a blacksmith, a cobbler, a weaver, a barber, a washerman, a Teli or oilman, a petty shop-keeper, and if possible, a goldsmith were usually to be found in every village. Besides these there was usually a priest and then a money-lender combining money-lending with grain-dealing. But what was more striking was the fact that the artisans were the servants of the village and their *jajmani* was hereditary. The *jajman* could not employ any other man except his regular workman; and the workman could not serve the *jajman* of the other workers. The general form of remuneration of the artisans and the menials was a customary allowance in grain at the time of the harvest. Sometimes there were endowments or rent-free lands given to the artisan and other functionaries. The carpenter and the blacksmith between themselves used to supply and repair the implements and tools of husbandry. The carpenter was paid occasionally by the job for the preparation of a cart or a sugar press and the blacksmith for moulding spades and wheeling with iron the cart wheels. The cobbler got as his perquisite the carcass of the dead animals in exchange for which he supplied leather accessories in agriculture, and on the occasion of marriage

of a son used to supply a pair of shoes for which he got *bakshish*. The barber not only shaved, but acted as a messenger, as a surgeon or operator and used to get handsome rewards or presents in marriages and other festive occasions. The same was true of the washerman, the potter and other menials. All these were fed at the time of festivities or caste dinners. The cobbler's wife usually served as a midwife. All these *jajmanies* were heritable and transferable and any encroachment on the *jajmani* of others by a defaulter was punished by the caste panchayat. The hereditary character of the artisan's office insured a regularity of services even in troublous times; but it also stereotyped their methods and put a discount on the growth of efficiency.

Another important feature of the village economic and social organisation was the rigidity of the caste system which determined the occupation of the people by heredity or birth, and not by natural aptitude, stereotyped the standard of workmanship, transmitted from generation to generation, put a discount on experiments, inventions or new methods and designs and monopolised the right to allow the adoption of a calling or profession in the hands of the caste panchayats just like the craft guilds in England. The caste panchayat regulated wages, prices and output of commodities, trade processes and methods. It tried cases of breach from the caste custom, arbitrated in disputes between members and organised strikes and boycotts to help the oppressed members. Social ostracism or boycott was the usual punishment given in case of grave breach of the custom or heavy fines and caste dinners were imposed. Sometimes a defaulter was obliged to feed a number of Brahmins.

Among the officers of the village the Mukhiya or the Lambardar or headman or patel was most important. His office was also hereditary and he was responsible for the maintenance of peace and order in his village and for the collection and payment of revenue. He also dispensed justice in the disputes of the village. The artisans and menials of the village were mostly his *goris*. They were not at

liberty to leave the village or to refuse to serve the village people. The social organisation of the village was characterised by the same features of feudalism that prevailed in England during the middle ages. Then there was the village patwari or *kulkarni* keeping the records and accounts and the chowkidar acting as the watch and ward of the village. In questions of major disputes the village council or panchayat consisting of the elders arbitrated and its decision was binding on all parties. Agrestic serfdom was very much prevalent. The menials and artisans had to work on the farm or the house of the village officer either free or for a nominal charge.

Custom and tradition determined every aspect of the village life. We hear nothing of the changes and fashions influencing the demands of the people. Ignorance, lack of communication and transport, the supremacy of the caste and the joint family, all conspired to steep the village people in conservatism, stolidity and made them stay-at-home. Like the manorial system in England, the rent, wages, and prices were largely determined by custom. The lack of communication hindered the mobility of labour but it promoted a sense of unity and solidarity which have now so much weakened. Absence of money and credit and the consequent prevalence of natural economy or barter was a very important feature of the village and it was mostly responsible for the payment of rent, wages and taxes on a customary basis. The caste and the joint family left no choice of occupation to the individual whose status in society was irrevocably fixed by his birth in a particular caste. The customary payments, however, were elastic varying according to the harvest and avoided the disparity between nominal and real wages due to the changes in the value of money. Similarly social and religious customs regulated the day to day life and the rites at birth, marriage and death. As Sir Edward Blunt has put it "Custom, in short, governs the relations of a Hindu both to God and man." It impinged on the life of the people at five points: functions, expenditure on ceremonies, caste penalties,

repayment of ancestral debts, and the maintenance of social prestige. A good deal of extravagance, improvidence and indebtedness were due to these customs.

In the absence of a well developed system of transport and communications the bumper harvest of one part of the country could not be utilised to relieve the scarcity and dearth of the other parts, and hence, a very notable feature of the village organisation was scarcity, frequent famines, and high prices alternated and punctuated by plenty and depression. The village had very little contact with the outside world, therefore, except for occasional visits of itinerary pedlars or cloth dealers and journey to big centres of trade and pilgrimage. Market under these conditions was very narrow and trade consisted of lighter articles and such necessities of life as were not obtainable locally in every village e. g. salt and iron. There was little specialisation or division of labour and the absence of external competition resulted in an "entire absence of localisation of industries." Rural industry was very crude and backward. Internal trade, therefore, was undeveloped, confined as it was within very narrow bounds as regards the kind of goods and the distance traversed. The division of the country into a number of small independent kingdoms with a heterogeneity of coins also hampered the development of internal trade. Then there were the tolls and taxes, the barriers and exactions and the difficulty of conveyance. Kachcha roads became impassable in the rainy season by carts. As a result of these difficulties fairs and melas were very much more prevalent in those days than now. These periodical fairs provided a good opportunity to the artisans of the neighbouring villages to dispose of their surplus wares; and to the consumers to buy their requirements of luxuries and comforts as could not be obtained locally. All these circumstances gave a peculiarly compact form to the village community and insured it against foreign attacks with undue sustaining power and resistance. Every village, isolated and self-sufficient, was a little republic in itself, and formed not

only a social but also an economic unit, and was completely organized to provide the ordinary simple needs of life to the village folk. To sum up "India was characterized by an aloofness from the outside world; it consisted of an immense number of entirely self-contained and self-supplying units with little contact with each other and practically no knowledge of the outside world." Gadgil.

Industry and Trade

From a very early period India was noted for the cotton, iron, silk and artware manufactures. As Prof. Weber says "The skill of the Indians in the production of delicate woven fabrics, in the mixing of colours, the working of metals and precious stones and in all manner of technical arts has from very early times enjoyed a world wide celebrity." The arts of cotton spinning and weaving were in a high state of proficiency two thousand years ago. Cotton weaving was only introduced into England in the 17th century. As regards iron manufactures, according to Prof. Wilson "the Hindus have the art of smelting iron, of welding it, and of making steel, and have had these arts from times immemorial." According to Banado "the iron industry not only supplied all local wants, but it also enabled India to export its finished products to foreign countries. The high level of iron industry in the manufacture of wrought iron is furnished by the famous Delhi Iron Pillar. Cannons were manufactured in Assam of the largest calibre, Indian wootz or steel furnished the materials out of which Damascus blades with a worldwide reputation were made; and it paid Persian merchants to travel in those old times all the way to India to obtain these materials and export them to Asia. The Indian steel found once considerable demand for cutlery even in England. This manufacture of steel and wrought iron had reached a high perfection at least two thousand years ago." India was likewise famous for her silk manufactures, her woollen shawls, boxes of sandalwood and cutlery. The waves of conquest that swept across the country from 11th century onwards must have seriously hampered the

development of the Indian industries. But the return of security under Akbar revived the old industries and handicrafts. For example, Bernier during the reign of Shahjehan, speaks of embroideries, streaked silks, tufts of gold turbans, silver and gold cloth, brocades, network of gold etc. and Tavernier also gives a long description of the manufactured goods, of the marvels of peacock throne and of the natural colours in its carvings, of carpets of silk and gold, satins with streaks of gold and silver, endless lists of exquisite works of minute carvings, and other choice objects of art.

As regards industrial organisation the urban handicrafts were also organised like the village crafts into trade guilds based on the castes. They were mutual friendly societies but governed and regulated the conditions and quality of work, membership etc. The chief feature of industrial organisation, however, was the paucity of capital. Lack of organised transport and the consequent narrow size of the market prevented an elaborate division of labour, but some sort of localisation and specialisation were noticeable. The artisans carried on small scale industries quite independently of capitalists, and as they worked to order and the materials were supplied by the customers, there were no middlemen, managers, or entrepreneurs. Like the village arts and crafts the urban handicrafts were also hereditary trades, and were, therefore, very stable. Their methods and designs, however, could not be improved under these circumstances. Money and credit facilities in the towns were well developed and remittance of money from one town to another by hundies and other instruments was a recognised business. The towns possessed a larger variety of trade; their industries were better organised and their markets were wider and well developed. The indigenous bankers, shroffs and chetties played a very important part in the financing and distribution of the urban industries and their products. On account of these facilities the standard of living of the urban handicraftsmen was much higher than that of the village artisans; they enjoyed a better variety and quality of products.

As regards towns, it is not possible to give an exact idea of the number of towns and the percentage of the population that lived in towns and that which lived in the villages but it is computed by some writers that about 40% lived in towns and 60% in villages. As to the number of towns it is certain that there must have been hundreds of thousands of them in existence in the period that witnessed a number of very flourishing urban industries. Moreover, the existence of a large number of independent chieftains and kings must have encouraged the growth of small towns as the seats of their capital or courts. As pointed before in the chapter, these towns were either pilgrimage centres, or capitals or seats of government and courts or they had grown up on the convergence of two trade routes or navigable rivers. Gaya, Benares, Prayag, Ayodhya, Hardwar, Puri, Nasik, Kurukshetra etc., for example, were religious towns; Agra, Delhi, Lucknow, Lahore, and Poona etc. were seats of governments and courts; while Mirzapur, Bangalore etc. were commercial towns. Of these the first two kinds of towns were of greater importance from the point of view of industries. In the sacred towns a number of metal industries producing bells, utensils and vessels of brass or copper for the holy water to be carried to the temples were to be found. They were in very great demand by the pilgrims who came to these towns from all over the country in spite of the lack of modern means of communication and transport. The industrial prosperity of the court and capital towns depended on the patronage of the kings and their courts and whenever the court or capital was removed from them they decayed. Their chief articles of manufacture were art and luxury wares. As the authors of the Industrial Commission say "The court of Indian rulers had always attracted to themselves the surplus grain of the countryside to feed the armies, officers, and dependents of the chief. These, and the traders and artificers who supplied their needs, made up the population of an old Indian capital. From an industrial point of view the most interesting section of this population was the class of artisans who were engaged in producing not only arms and leather accoutre-

ments, but rich textile fabrics, carved stone, wood and ivory, wrought metal, jewellery and other articles of luxury, often of exquisite workmanship and high artistic value. Even to-day the famous centres for the production of Indian artwares are the old capital towns. The earnings and social position of such craftsmen were, in times gone by out of all proportion to those of the less skilled workers in the villages or small towns." These artistic articles of luxury were very much in demand not only within the country but even outside and their excellent workmanship excited the jealousy of foreigners. The number of commercial and trading towns was very small and this was due mainly to the insecurity and difficulty of communication. They had grown up on the recognised land routes or on navigable rivers or on the sea coast. Their trade consisted mostly of rare and costly objects but the volume of both internal and external trade was not very large. Precious metals, artistic manufactures, and a few drugs and dyes made up the bulk of their traffic which was mainly directed to ports or to military and administrative centres. The chief articles of export consisted of the fine textile fabrics, the Dacca muslins, the ebintz, the calicoes, silk manufactures and woollen shawls, silver and gold brocades and spices. These were exported to Syria, Persia, and Arabia and to the Continent of Europe and England. It was this rich and lucrative trade in spices and the fineries which attracted the European traders to India and ultimately led to its conquest by the British. The trade of the port towns which were numerous consisted of rare and valuable articles and spices. The foreign traders had in the 16th and 17th centuries established their factories and agencies, collected these articles and took a prominent part in finance and organisation of the trade.

CHAPTER II

Economic Organisation of India in 1760

The essentials of the economic organisation which have been described above continued intact throughout the Moghul period. At the beginning of Aurangzeb's reign the Regulation or zabt system of land revenue assessment with necessary changes according to local conditions prevailed in northern India. The orders of the Emperor issued in 1665-66 aimed at the extension of cultivation, increased culture of high class crops, and construction and repair of wells for irrigation. The peasants who did not take interest in cultivation of land were punishable. The revenue demand was pitched higher than under Akbar and comprised between $\frac{1}{3}$ to $\frac{1}{2}$ of the gross produce. The methods of assessment were also changed: instead of individual assessment, group or village assessment became the general rule except in poor villages where Batai system was in vogue. The Amin fixed the assessment on the basis of available data and the Headman spread it over the individual peasants of the village. The Provincial Dewan inspected these assessments and their distribution as also the records of the village accountants with a view to prevent injustice and misappropriation. The system was, however, liable to abuse by the Headman and the Patwari. Collections of revenue were mostly in cash although payments in kind were also allowed where currency was scarce and land poor. Sometimes assessment was made by measurement or sharing as under Akbar, and allowances were made for drought, frost, low prices etc. at the time of revision. *Abwabs* and other charges in excess of revenue were forbidden. This system of land settlement applied to Khalsa or Reserved lands only which provided a model for the Jagir lands. The provincial Dewan

was required to inspect them as well and the Jagir officials were also punishable.

A contractual tenure was introduced in 1668-69 but Moreland holds that the system was an old Hindu institution. The contract holder was ordinarily succeeded by his heir, could lease, mortgage or sell his rights in the holdings. The usual punishment for default was the sale of the peasant's family but this must have been a rare practice during Aurangzeb's time because there was a scarcity of peasants then. From the 13th century onwards cultivation increased except in periods of war or pestilence and the size of the holdings as well as the number of peasants had increased. But on account of administrative pressure the unwillingness of peasants to cultivate land increased. Bernier wrote in 1670 that the Empire was badly cultivated and thinly populated as the result of the extortion and cruelty practised by the officials and Jagirdars. Many peasants in despair left the country and sought a more tolerable mode of existence either in the towns or camps of a Raja where there was less oppression. This is proved by the fact that the revenue from Khalsa lands alone rose from 150 to 400 lakhs in the reign of Shahjehan alone.

Another notable feature of the period was an increase in the number of intermediaries between the state and the peasants. The greater part of the land was already in the hands of Jagirdars or assignees but the assignments were revocable at the will of the Emperor. Towards the middle of the 18th century however, on account of certain circumstances intermediate tenures began to develop by this time. The agricultural production was declining, the central authority was weakened and hence afforded less and less protection to assignees and peasants. They were left to the mercy of adventurers or usurpers. Then the Mahratta inroads into the various parts of the Empire and the insecurity that prevailed caused further disorganisation and confusion. Hence actual possession came to count for more than legal right and an assimilation came about as among the

ifferent classes of intermediaries. Hence, officials, Hindu and Muslim chiefs, simple assignees, foreign powers and usurpers acquired Taluqas and held them in the same way irrespective of their origin and were confused together as holders of the same land. Others extended their holdings illegally. Farmers of revenue thus made themselves masters of their lands. Their office had become hereditary by now and this fact helped them to become owners of land Taluqas. Thus when the British assumed charge they found a system slightly different in essentials from the one sketched above but showing much confusion in details. The collapse of the Moghul administration had brought about much confusion of rights to land and the superimposition of many intermediaries who looked alike to foreign administrators in respect of their rights.

After the death of Aurangzeb in 1707 the Moghul Empire began to crumble and the country was plunged into a long period of anarchy, brigandage, plunder and rapine. Security of life and property were nonexistent, and therefore, the stimulus to economic development was absent. The constant wars and internecine feuds of the 18th century, the infesting of the roads and highways of trade and commerce by thugs and robbers, pindaries and other wicked persons, and the absence of a strong centralised administration rendered it impossible for the people to continue their peaceful avocations of agriculture and trade. The downfall of the courts and the nobles deprived the urban handicrafts of their most valuable market and patronage and therefore, the arts and crafts of the Moghul period dwindled into insignificance. The baneful influences of the political chaos were not confined to the towns and urban industry but they also enveloped the villages and must have affected very adversely the peaceful pursuit of agriculture and its allied village crafts. The strong and the wicked, however, had their palmy days and they began to exact and extort in many ways several ingenious and illegal deductions from the people. On the break-up of the Empire many chieftains and kings who owed allegiance

to it set up their independent states and issued their own sikhas or coins. The East India Company found 994 coins of different weights and values in circulation in the country. This multiplicity of coins of different weights and fineness hampered the development of trade. Then there were a number of tolls and tariff barriers imposed in every petty state. This interfered with free movement of goods and merchants and compelled the internal trade to be confined within very narrow bounds. However, in spite of this desolation and anarchy, the village, the typical unit of economic and social development in our country, remained intact with its compact organisation. It was due mostly to the lack of communication and transport and the absence of a strong centralised administration.

At the close of the 18th century there were three types of villages. The most usual type was the village inhabited by a homogeneous brotherhood of cultivators and some non-homogeneous residents. But the conditions differed very widely from one part to the other. In addition to the peasants proper the village had three other classes of people: the landless labourer, the village servants and the recipients of charities. The landless labourers were like the English serfs and the servants were paid in cash occasionally and in produce usually and cultivated small areas of land free of charge. Similarly the recipients of charities held rent free lands. The brotherhood villages often paid a lower rent.

The affairs of all types of villages were conducted by headmen who collected the land revenue for the village on a contract basis, distributed the assessment and discharged other duties. The methods of assessment and collection were also similar to those of Aurangzeb's reign though on account of a number of exactions and cesses the demand was now pitched far higher.

Conditions in 1760:—It is not possible to give an exact idea of the total population of the country at that time nor is it possible to say accurately as to what percentage lived in towns

and what percentage in the rural areas. However, there were very few towns of considerable size and about 90% of the people must have lived in villages. There were probably two classes of people, the rich and the poor. There was no middle class even by that date.

As to agriculture it was in a very backward state. There were no proprietary rights in the land, the king was the absolute owner. There was no fixity of tenure; the jagirdars or assignees held the land in pleasure of the king. The zamindars and intermediaries who came into existence during the later Moghul emperors collected rents and paid revenue to the state but they had no rights in the land. The land revenue varied according to the needs and the whims of the kings. The political chaos and unsettlement, as said above, prevented any security of life and property. The tillers of the land were not sure to reap the fruits of their industry and their crops were liable to destruction by hordes of marauders and invaders. Under these circumstances, there was no accumulation of wealth and no growth of capital. Agricultural practice and implements were as archaic, crude, and simple as before. Production lagged behind. Self-sufficiency and subsistence farming were still the out-standing features of the village organisation. Lack of transport not only caused a wide variation in the prices of agricultural commodities, but prevented the utilisation of any surplus produce of one area to relieve the famine and scarcity of the other. No improvements in methods or marketing took place. The feudal relations between the landlords and the cultivators still prevailed. The caste system and the joint family, the caste panchayats and the hereditary offices of the artisans of the village continued unabated. Barter economy and its concomitants status and custom held sway.

As regards industries, there were two kinds of manufactures. The village cottage industries were carried on as before to supply the simple needs of the rural population and their products were exchanged for grain or bartered away. The urban

handicrafts were organised into the royal workshops or Karkhanas in the capital and other towns and produced all the requirements of the military, the officers and the princes. They were mostly luxuries. Outside the royal workshops thousands of independent artisans carried on their handicrafts in their own homes but they also produced only articles of luxury in demand by the nobility and the rich classes. They were also exported outside. The most important industry of the time was the cotton textile which had attained a very high level of efficiency. The fine fabrics of this industry commanded a market throughout the country and outside in Europe and England. In spite of the fall of the Moghul courts the industry was prosperous. Most of the foreigners had established their factories and settlements and carried on a very lucrative trade in it. The loss of the courts was therefore made up to some extent by the increased exports. Next important industry was silk manufactures which were in very great demand both in Europe and India. Then there was the calico-printing industry which was also very prosperous on account of its extensive demand by the nobility of the country and the foreigners. After the textiles came the indigo industry which was carried on in northern India as an ancillary trade to agriculture and was very much in demand in Europe for the navvies. Then the manufacture of salt-petre was a very thriving industry at that time and provided employment to thousands of Lunias. It was mostly exported to foreign countries. Finally the manufactures of silver and gold brocades and fine art productions, enamelled works, and silver and gold cloth were carried on all over the country and especially in Rajputana as also that of wood and stone carving. They were reputed throughout the world for their excellent workmanship and exquisite designs.

As to trade the conditions of roads after the fall of the Empire became very unsatisfactory and their safety was jeopardised by the nefarious activities of the thugs and robbers. The traditional slow-moving bullock cart was the only means of land transport for both men and goods. Journey was made by men

also in palanquins, and on horses. In the villages barter still reigned supreme. Under these conditions of unsatisfactory communication and transport the village was organised on self-sufficiency basis and there was little trade except in such necessities as were not procured locally. Fairs and melas were still very common methods of sale and purchase. The foreign trade as well as internal trade consisted mostly of articles of luxuries and fashion, which were light in bulk and weight but fetched more values.

A detailed description of the conditions of industry and trade will be given in the next chapter.

CHAPTER III

Economic Transition in India (1765-1899)

The compact economic and social organisation of the self-sufficient and isolated village together with the rural and urban handicrafts was completely transformed during the century that ensued after the grant of Diwani or the right to collect revenue by Shah Alam to Clive in 1765. All through the period wars were rampant and the difficulty of maintaining law and order, of finance and the consequent lack of a constructive policy hampered economic development. Nonetheless, the period coincided with the Industrial and Commercial Revolutions in England and this coincidence reacted very powerfully on the trade, industry and agriculture of our country. The ever-growing demands of the industrial revolution for food stuffs for the rapidly increasing urban population of England, and for raw materials for her gigantic factories, gave a new value, a new importance to Indian trade with England. Gradually but steadily a radical change in the nature and extent of our trade was brought about. Instead of exporting cotton piecegoods and other manufactures India began to import them and developed an enormous export trade in primary products. The revolution in transport and the consequent phenomenal fall in freights stimulated to movement of bulky raw produce and therefore caused a great increase in trade. Then the opening of the Suez canal in 1869 by shortening the distance between India and England by 3000 miles revolutionised the movement of primary products from our country to that of our masters. In return for this growing export trade in primary products she furnished the largest market for English manufactures of iron and cotton at the time when the purchasing power of the continent of Europe was restricted on account of the Napoleonic wars and their aftermath. Jute, cotton, dyestuffs,

oilseeds, raw hides and skins, tea and sugar became the chief exports, whereas prior to this date raw silk, silk goods, calicoes, cotton piece-goods, spices, salt-petre, ivory and indigo were most prominent in our export trade. This increase in the export of primary products and the consequent rise in prices led to commercialisation of agriculture, to the downfall of the rural and urban handicrafts, to a progressive ruralisation, to increased pressure of the population on the land, to subdivision and fragmentation of holdings, to increased poverty and indebtedness and to an increased intensity and frequency of famines. But it also led to the establishment of the plantation of jute, tea, coffee, and indigo, and to the cultivation of cotton. By 1860 the establishment of Pax Britannica i. e. law and order under the British rule throughout the country was complete and this led to the creation of a strong, stable and centralised administration securing life and property which is the *sine qua non* of economic development. Then from the middle of the nineteenth century, there began the era of the Public Works under Dalhousie and these more than anything else have transformed our entire economic life. The impact of western ideas and civilisation and the consequent spirit of individualism, the establishment of courts of justice, the settlement of land revenue, the abolition of slavery, and of internal tolls and tariffs, the unification of the systems of coinage and a centralised system of finance were the other outstanding events of the period which played their own part in breaking up the isolation and self-sufficiency of the stagnant villages. The economic policy of the government in this period was characterised by *laissez faire* and *laissez aller* which had a very disastrous effect on our industry and trade. The cumulative effect of this centralised administration, the development of transport and communication and the impact of western civilisation was the sudden shunting of the country from a local to a world economy without allowing sufficient time for the necessary adjustments to take place. And, hence, our one-sided and unbalanced economic development.

The principle of *laissez faire* meant the abolition of internal tolls and tariffs, a lower tariff for revenue purposes only, the fixing of the land revenue at a minimum and the abolition of agrestic serfdom and slavery. It also meant the substitution of competition and contract for status and custom and therefore, the development of freedom of enterprise. This individualism leading to the growth of individual legal rights struck at the root of the corporate life of the village and caused the disintegration of the village community. But on account of its evil effects the government had to give it up after 1857 even before the reaction of England against individualism in the nineties of the last century.

The main features of this transformation are:—(i) *The abolition of the self-sufficiency and isolation of the village:* The village is no longer a self-sufficient and secluded unit. Many articles of daily consumption which enter into the budget of the village folk are not grown locally but are imported from different parts of the country or abroad. For example, Swadeshi or foreign mill cloth, utensils, matches, medicines, scissors and knives, bangles, mirrors, combs, umbrellas, lanterns, sugar, tea, spices, salt, kerosene and other oils, dry fruits, dyes etc. and even sewing machines, oil engines or gasoline plants for flour milling etc. are all now imported from outside. The village crops are no longer grown for local consumption only but for sale and export. Thus, the village has come to live on exchanges with the outside areas and this contact has resulted in a veritable revolution of great import in the rural economy of the country. While on the one hand, it has meant an improved standard of comforts in the village on the other, it has given rise to acute problems of rural reconstruction and uplift.

(ii) The second important feature is *the supplanting of natural economy or barter by a money economy.* The increased exchanges with the outside areas and rise in agricultural prices and remittances from those employed in towns are bringing in an ever increasing quantity of money in circulation in the villages. Custom and status therefore, which regulated the economic

life of the village community have now given place to contract and competition in the wake of the railway, money economy and western methods of exchange and distribution. Rent, wages, and taxes and interest etc. are now paid in cash as also the imports from outside. In the case of the village artisans, however, the commutation of services into money payment has not yet been completed. This introduction of money economy facilitating exchanges has provided the villager with a free and wide market in which he can sell his produce at a competitive price but it has also led to insecurity of agricultural profits and instability of prices. The increased price of agricultural produce has led to an enhancement in the value of land as a security and this has increased rural indebtedness. The pressing demand of the cultivator for money to pay rent and interest compels him to rush to a glutted market and press down the prices to his own disadvantage, but he is so needy and poor that he cannot afford to wait for a better turn. And then he has to purchase for his consumption from the grain dealers at higher prices.

(iii) The third important feature is a *radical change in the nature of famines*. It was pointed out in the last chapter how in the absence of railways and metalled roads it was not possible to utilize the surplus produce of one area to relieve the scarcity and famine of the other at a distance. Hence a famine usually meant lack of food and took a heavy toll on the population. It means now a lack of purchasing power, scarcity prices and a temporary unemployment of the agriculturists. However, the fear of a bumper harvest with low prices causing ruin has also been destroyed by the extension of the markets.

(iv) The fourth feature of the transition is the *destruction of stability, stolidity and immobility of the rural population*. The caste, the joint family and the panchayat are all undergoing a disintegration. Regularity of demand and the fixity of occupations by status, the forced immobility of persons and goods caused by the lack of railways and the motor buses etc. and the consequent isolation and stagnation of the village, are all changing

fast; the change being more pronounced in villages in the vicinity of big industrial and commercial centres.

(v) The fifth feature of the transition is *a change in the village arts and crafts and in the parent industry agriculture*. So far as the artisan's crafts are concerned there have been no remarkable changes in their organisation or technique except in a few cases. The village even today has its carpenter, blacksmith, potter, washerman and barber etc. who perform their customary duties and receive customary allowances in grain. But these are of lesser importance today and the village artisan is apt to migrate to near by towns in search of higher and better remuneration. Moreover, the possibility of getting its requirements from outside on account of the advent of modern transport facilities and money economy precludes the village from depending on the local products of the artisans. Gradually the remuneration of the artisan has taken the form of cash payment although it has not yet completely supplanted the payment in grain. But the weaver, the blacksmith, the dyer, and the tanner etc. have been very adversely affected by the competition of the machine made goods from the external and internal factories. A number of village arts and crafts have been destroyed. The cotton handloom or charkha which was the pride of every village home in the past has been destroyed not only on account of internal and external competition within the country but also by loss of foreign markets. The weavers as also the goldsmiths have migrated to the towns or to bigger market villages. Handweaving, however, is not extinct as in England. According to the Industrial Commission there were in 1916 still between 2 to 3 million handlooms at work employing about 6 million weavers with about 50 crores as annual earnings. The growing use of imported implements and tools has badly affected the occupation of the blacksmith and the carpenter while the increasing use of imported utensils of brass copper etc. from the towns has rendered ineffective the services of the potter to a very great extent, except in the supply of tiles:

The growing exports of raw hides and skins and the consequent rise in prices together with the increased imports of tanned hides from abroad has hit very hard the village tanners. Similarly, the village Teli has been hard hit by the import of kerosene and other mill produced oil from the towns and by the extensive export of oil seeds.

This decline of the village handicrafts has displaced a large number of the village artisans who have either migrated to the factories in distant towns or have been employed as domestic servants by the middle classes or else they have pressed hard on the land and become farm labourers. They have been compelled to give up their ancestral occupations. But some of them have tried to readjust themselves to the changed conditions of the times, for example, the weaver still weaves cloth though from imported mill yarn; the blacksmith utilises ready made iron and tin sheets, the carpenter uses implements and tools while the tailor a sewing machine. It is only those who could not leave the village or adapt themselves to the changed circumstances that have suffered the most, and they are the first to be affected by famines and distress. In certain instances, their migration to the towns has improved their material welfare e. g. the carpenter and the blacksmith have been absorbed in the growing engineering workshops, factories, building and furniture trades in the towns. On the whole however, the rural industries have decayed and it is one of the most important problems of the modern times to restore them though not in their pristine glory.

As regards agriculture, so far as its organisation, equipment and technique of production is concerned, there have been no remarkable or revolutionary changes. The unit of cultivation is still the small farmer with his tiny, scattered, uneconomic holding, with little capital and little hired labour. The increased pressure of population on the land on account of the decay of the rural and cottage industries, the increased population, and the increased fractionalisation of holdings have further increased

the number of small cultivators. And inspite of the assiduous efforts of the departments of agriculture and cooperation for the last three decades and over the methods of production and agricultural practice are the same in their essentials as they were a century before. But so far as economics of agriculture is concerned, the introduction of money economy and modern methods of transport making possible the movement of bulky raw products have increased the prices of the cultivator's products and provided him a free and wide market. Besides these some more significant changes have been introduced and they are as follows:— ✓

(a) *Settlement of land revenue.* The period witnessed attempts at finding out, registering, and securing the land rights of all parties and at adjustment of the assessment of land revenue from time to time in prosperous years. This has prevented a uniform system of land revenue settlement being adopted throughout the whole of British India. There was no absolute ownership of land in our country but the cultivator enjoyed a security of tenure and rights of cultivation so long as he paid a fixed share of the produce to the lord or the king. The political insecurity and low level of production had caused decline in the market value of land and many feudal landlords and revenue farmers had come into existence after the fall of the Moghul empire. Their position was strengthened in the period of insecurity. The East India Company on the assumption of territorial power found a large number of such intermediaries, who were mistaken for landlords with absolute powers in the land. In 1765 the Company got the right of collecting revenue. The Nawab of Bengal was retained and was responsible for the good government. This placed the Company in a very happy position. It introduced the system of five years farming and realised the land revenue to meet the pressing demands of its directors with cruelty and hardships. Old Zamindars were turned out for defaults in payment and their property was sold. The land revenue of Bengal in 1771 was more than that of 1768

and this inspite of the severe famine of 1770. This five yearly system was supplanted by annual auction system by Warren Hastings. It increased the misery and the hardships of the zamindars still more and collection became more stringent. Thus, the Company aimed at maximum revenue only and did not care for the zamindars or the tenants. This system continued till 1793.

The period as adverted to above coincided with the emergence of the doctrine of freedom of competition and enterprise in England and therefore the English notions of land settlement were applied to India. In 1793 and later Lord Cornwallis introduced the Permanent Settlement in Bengal, Bihar, North Madras and the Benares division of U. P. It fixed the amount of land revenue to be paid by the landlord to the government in perpetuity but left the amount to be charged by the landlord from the actual tiller of the soil to his sweet will. The amount of the revenue was fixed at 10/11 of the rentals received by the zamindars. It was expected that the surplus revenue would fructify into the pockets of the people, improve their standard of living, and would lead to permanent improvements on the land and to the development of scientific agriculture. On the other hand, there are a number of scholars who contend that Cornwallis, the diplomat, wilfully created a number of zamindars who on account of the recognition of their rights and a guarantee to respect them would stand by the British rule in times of emergency and would prove a bulwark of strength to the maintenance of the British rule in India. This is proved by the help which the zamindars gave to the British during the year of the Mutiny in 1857 and for this they were rewarded by further grants. However, the bright hopes of planting English type of landlords on the Indian soil were belied and it was found out that the surplus instead of fructifying into the pockets of the people was spent lavishly on social ceremonies and litigation. The establishment of the courts of justice stimulated extravagance and litigation; the security of tenure, the establishment of peace and

order, and the gradual increase in the price of land gave a new value to landed property as a security. The increase of population and the decay of handicrafts causing an increased pressure of population on the land acted in the same direction, and in his ignorance and illiteracy the cultivator had a greater temptation to pledge his credit to the utmost and bury himself in debt. No improvements were effected and rackrenting and absentee landlordism ensued. The Government had been deprived of a share by the permanent settlement in the unearned increment of land. /

In 1812 the monopoly of trade of the E. I. Co. was abolished; this reduced the profits of the company which came to depend more and more on land revenue for administrative expenses. Hence, between 1807-22 settlement of land revenue was made on a temporary basis in Madras, Bombay, and in U. P. and Punjab later on. In Bombay and Madras, there were no big zamindars. Therefore the settlement was made with every tenant and the share of the government in every plot was fixed. The uncultivated land belonged to the state and the settlement was triennial. This was the Ryotwari system. The share of the government was however pitched very high and the revenue was collected with great rigour. In Bombay the revenue demand was so high that it was never realised in full. In 1835 the assessment was revised settlement rules were framed and compiled in 1847 and long leases of thirty years were recognised. In the Madras Presidency, however, reforms on the lines of U. P. were introduced only in 1855. In the U. P. gradually as the various parts were annexed the triennial system of settlement was introduced and in 1819 the Mahalwari system was introduced. Under this system settlement was made with landlords or with village communities of landlords. The unit of settlement was a Mahal or a group of villages. In 1833 the government share was reduced to $\frac{2}{3}$ of the rentals and settlement period was fixed at thirty years. A land revenue code was framed and the method of settlement was systematized. In 1851 according

to the Saharanpur rule the government share was fixed at 50% of the rentals. Similarly in 1819 when the Punjab was annexed rents were fixed in money but the assessment was kept very high and settlement was regularised only in 1858.

The acquisition of such a vast territory and the consequent difficulty of managing the twin affairs of trade and government led to the segregation of these two functions. The Company ceased to trade from 1833 and with a government guarantee of 10% dividend took up the administrative agency for the government of the country. The monopoly of its China trade was also abolished. Ever since 1813 the Company had been administering "intrust" for England and as a result of exhaustive inquiries in 1813, 1821, and 1831 stringent regulations had been imposed on its affairs. These inquiries had revealed clearly the fact that the company could not adopt a constructive policy of economic development so long as it had to proceed with "a trowel in one hand and a sword in the other". But on account of the predominance of the *laissez faire* doctrine in England the British Government did not undertake the government of India into their own hands. It was only after the Mutiny in 1857 that the country began to be governed directly by the British parliament, and a change in the attitude of the government concerning India and its problems came about. From the third quarter of the last century with a view to check rackrenting and protect the tenants against the tyranny of the landlords, the government began to pass a number of tenancy laws in the Zamindari provinces which were based on the three *F's* or principles of Fixity of Tenure, Fair rents, and Freedom of transfer.

(b) *Commercialisation of agriculture*: The development of the railways and steamships with very low freights and the opening of the Suez canal in 1869 developed trade in primary products and this led to the cultivation of commercial and non-food crops like cotton, oil seeds, indigo, jute, etc. The development of irrigation facilities and the increasing circulation of money gave it a further impetus. The cultivation of cotton and

oil seeds although they were not plantation industries was very much stimulated in this period. The American war in 1812 led to the export of cotton from India. The shortage of the fibre, however, led to a more vigorous cultivation of raw cotton and several cotton committees after 1848 were appointed. The average annual export from 1845-50 was worth £ 1½ millions. However, a rapid cultivation of cotton took place only after the American Civil War (1861-65) which cut off the supply to Lancashire mills and caused a boom in cotton trade. The increasing demand for lubricating oils for machines led to a considerable development of oil seeds cultivation. The Irish potato famine in 1845-46 encouraged the export of rice, and its cultivation for commercial purposes increased in the low lying plains of the Ganges valley. The result of this commercialisation has been a degree of specialisation of land for different crops e.g. jute in Bengal, wheat in Punjab, cotton in Bombay and Berar, sugarcane in U. P. and Bihar, rice in Bengal and Burma, and oil seeds in the C. P. This growing specialisation and commercialisation of agriculture has brought into existence a large number of middlemen who eat away the lion's share of agricultural profits. On account of his ignorance and illiteracy, his poverty and low level of cultivation and production, the cultivator has failed to reap the full benefit from the rise in agricultural prices in the period. Indian prices have to move in conformity with world prices of primary products and this instability of prices has increased the insecurity of agricultural profits. Moreover, the intensity and frequency of famines has increased, and status, custom and barter have given place to contract, competition and money economy. This commercialisation in turn stimulated the development of roads and railways and of irrigation facilities.

(c) *Subdivision and fragmentation of holdings:* The increased pressure of population on the land caused by the decay of handicrafts and cottage industries in the period led to increased subdivision and fragmentation of holdings and made them uneconomic.

(d) *Rise in agricultural wages and scarcity of farm labour:*

The introduction of money economy and the commutation of services into money payments, the migration of the people to towns and factories in search of employment caused a rise in agricultural wages and scarcity of farm hands especially at the time of the harvest. But this was due perhaps more to the caste prejudices.

(e) *Transfer of land from cultivating to non-cultivating classes and increase in rural indebtedness:* The increased value of land as a security, the easy and facile credit from the money lender, the freedom of transfer and the individual legal rights etc. increased rural indebtedness and caused a transfer of land from the cultivators to noncultivating money lending classes and necessitated government intervention. Land Alienation Acts, Land Improvements Loans Acts, Agriculturists Loans Acts and Tenancy legislation etc. had to be passed to give financial aid to the cultivators and to save them from the usury and rapacity of the money-lender and the tyranny of landlords in the third and last quarters of the last century.

On the whole, therefore, the modern means of communication and transport introducing far-reaching and fundamental changes in the foreign trade of the country and stimulating the export of food stuffs and raw materials had given rise to very acute problems of subdivision of holdings, rural indebtedness, marketing facilities and rural finance. Gradually modern methods of exchange and distribution have been engrafting themselves on a primitive and unprogressive system of peasant farming and have necessitated a paternalistic attitude on the part of the government. A Department of Agriculture was created in 1884 and by the end of the century its organisation was improved very much.

INDUSTRIES

As to industries, at the beginning of this period in addition to the rural arts and crafts which we have described in a previous chapter, there were urban handicrafts producing fine

textiles and other luxuries for the courts, the rich classes and for export. Cotton weaving, silk manufactures, embroidery, woollen shawls and carpets etc. metal working, stone carving, enamelled jewellery, ivory carving and lacquer work, manufactures of arms and shields were organised in workshops as well as in the artisans' homes. The artisans huddled together in specialised streets in the towns, were organised into craft guilds and worked in some places independently, with the help of apprentices, and in others they worked under a dealer or under the royal workshops. Thus domestic system had come into existence. They usually worked to order. Their implements and tools were simple and crude; there was not much of division of labour and standardisation of production. Demand was very regular.

The most important industry of the time was *cotton textile* and it was carried on throughout the country. According to Mr. R. C. Dutt "weaving was the national industry of the people and spinning was the pursuit of millions of women." The most important centres of the industry were Dacca, Lucknow, Nagpur, Ahmedabad, and Madura. Next came *woollen industry* and this was localised in Kashmere and the Punjab and produced shawls of exquisite designs and very attractive carpets. *Bell metal works* were localised at Benares, Nasik, Poona, Ahmedabad, Vizigapatam and Tanjore etc. *Arms and shields* in the Punjab and Sind, *silver and gold brocades* at Benares, and Lucknow, *ivory works* at Murshidabad and *stone carving and enamelled jewellery* in Rajputana. Moreover, marble work, sandalwood work, glass and ornamental rings, tanning and paper making and perfumery were also well developed and fairly distributed over the country. *Shipbuilding* industry was also very thriving before the era of the iron and steel vessels.

The East India Co. left this fabric of Indian indigenous industries intact in the beginning, but later on it established its own factories and workshops and employed labourers and artisans to work for wages. The export trade of the

company, however, led to a drain of bullion from England to India and therefore it was urged upon the company to encourage the export of the British manufactures to India so that the export of bullion would stop. But as there was no market for manufactures in India the company used to purchase raw cotton, opium and silver in India for export to China and with the proceeds of these goods it purchased tea, Nanken cloth, and raw silk from China and cotton and silk piece goods, raw silk and salt petro from India and these were exported. Even the land revenue from Bengal was added to it and it was called the "investment." The purchase of cotton goods was done either through contractors or directly but later on the former method was given up. Thus a monopoly in weaving trade was established by the company and the weavers were compelled to work for it with great hardships. The weavers were prevented from selling to other agencies until the full quota of the company's contract was complete. Cash advances were forced on the weavers and thus they were compelled to work for the company. The servants of the company stamped the cloth during the manufacturing process with the company's *chhop*. The contracts were not recorded properly and great hardships were inflicted on the weavers. Then orders were issued that without the completion of the company's investment the private traders should not trade in those things which comprised the investment. This restricted the development of the trade to a very great extent. In such goods as were not required by the company trade was free. The manufactures of silk were discouraged as was also the manufacture of cotton cloth of very high counts. Mr. Dutt refers to the Orders of the Directors of the Company dated 17th March 1769 in which it was written "Manufacture of raw silk should be encouraged in Beogal and that of manufactured silk fabrics should be discouraged and silk-winders should be forced to work in the Company's factories, and prohibited from working in their homes." The donning of silk fabrics imported from India was prohibited by law in Eng-

land and the same was true of fine cotton fabrics. Then came the Industrial Revolution in England and the free trade policy of the Government exposed the indigenous industry to the full blast of unfettered foreign competition. Both the home and foreign markets for the industry were destroyed by the cheap machine made goods. Textiles in general, and cotton spinning and weaving in particular, mining and metallurgical industries, dyeing and tanning were the hardest hit. In 1783 the first sample of English muslins was sent to Bengal and export of yarn from Bengal to England ceased in 1786. By 1833 raw cotton from India had begun to be exported to England and the exports of cotton and silk goods from India to England had ceased. The open door policy of the government completed the rout of the indigenous industries. By the middle of the last century plantation industries with British capital and enterprise were introduced and salt and opium became government monopoly. ,

Causes of the decline of indigenous industries:

1. *The decline of the indigenous courts:* The nobles and courtiers of the indigenous courts had provided the main demand of these art and luxury industries, and therefore, when the Moghul empire broke up and the British power extended, the patronage of the courts and kings to these industries declined. For example, the silk manufacturers of Bengal were prosperous because of the patronage of the courts of the Moghuls at Agra, Delhi and Lahore but when the empire broke up they naturally began to decline.

2. *Adverse foreign influences:* The educated and professional classes were affected by the rulers and preferred imported machine made goods to *swadeshi* ones. The disarming of the population led to the decay of arms and weapons factories. There was still some demand from Europeans which helped to arrest their rapid decay; but the introduction of new forms and patterns to suit the tastes of the Europeans and the demand for cheap goods caused a decline in their workmanship and

quality. The London exhibition in 1851 stimulated the foreign demand for Indian goods but as Mrs. Vara Anstey says "Cheap material, meretricious designs and scamped workmanship became universal, and the ignorance and bad taste of the new purchasers made them unwilling to pay more for good than for inferior articles." The void created by the disappearance of the courts was only partially filled up.

3. *The policy of the E. I. Co. and the British Parliament:* The E. I. Company in the beginning encouraged Indian industries because its export trade and profits were dependent on them. Later on, however, on account of the opposition of the Parliament, it began to encourage the import of English manufactures at the cost of our industries. As England was not industrially so much advanced, the Indian trade of the company was causing a drain of specie from England to India. Therefore with a view to protect the English industries against the competition from Indian goods, especially in silk and woollen trades, prohibitory and protectionist duties were levied on Indian goods. But the import of English goods was either free or subject to a nominal duty in India. Thus, while England was protecting her own industries against foreign and Indian competition, she forced a policy of free trade on India. This apathy and indifference of the Government coupled with prohibition on some and imposition of 30 to 80 per-cent duties on others injured the exports from India. Moreland, however, thinks that the influence of the protective measures, adopted by England, on the decline of the Indian cotton industry, is exaggerated, because the English market was a very small proportion of the extensive cotton exports from India which went to China, Japan, Spice Islands, Burma, Pegu, Persia, West Africa and Europe outside England. Still it is indisputable that these measures of the Parliament did injure the Indian cotton and silk trades. The prohibitory duties on Indian imports into England were not removed until the middle of the nineteenth century when England became a free trading country, but by that time the

unfettered competition of English manufactures in and outside India had already crippled the Indian industries.

4. *Foreign competition of machine made goods:* But the most important cause of the decline of the handicrafts was the Industrial Revolution in England and the ensuing Commercial Revolution caused by mechanical transport. As Mr. R. C. Dutt puts it "The invention of the power loom in Europe completed the decline of Indian industries". In any event the Indian handicrafts could not have withstood the onslaught of the gigantic machine production, but the rapid construction of railways, roads and telegraphs etc. opened the country to the full blast of this competition. The English imports into India increased by leaps and bounds and the exports of Indian manufactured goods declined heavily. The change was too sudden to permit any adjustment. The result was an industrial depression. The decay of the handicrafts deprived the artisans of their traditional occupations and they had to fall back upon agriculture or to seek employment in factories. This increased pressure of population on the land aggravated the intensity and severity of famines. The rapid ruralisation introduced an element of unbalance in the rural and urban economy of the land.

5. *Laissez faire policy of the Indian government:* While all this was taking place the government adopted an attitude of indifference and of direct apathy. Instead of helping the struggling industries they encouraged deliberately the import of English manufactures by helping the English industries to exploit the Indian market. They did not levy duties on imported goods to protect the indigenous industries but instead adopted a free trade policy. The upshot of the whole trend of government policy was that home goods were replaced by imported goods even in the home market. The Indian economic development became one-sided. The whole country was transformed into an agricultural one.

Hence, towards the close of the 18th century the indigenous industries began to decline and during the nineteenth century on account of the foreign competition of machine made goods they were strangled. By 1875 industrial activity was at the lowest ebb and leaders of Indian thought and patriots like Naoroji, Dutt, Ranade etc. deplored the progressive ruralisation of the country and its one-sided development and complained of the terrible economic drain of wealth from India to England and other foreign countries. The Famine Commission of 1880 pointed out the dangers of extreme dependence on agriculture and made out a very strong and convincing case for the diversification of occupations and industrialisation. Since then there has been a slow but steady development of large scale industry and this belated revival is gradually transforming India, "from a purely agricultural country into a partly manufacturing and partly trading country."

Plantation industry : The coming of the railways introduced English capital and enterprise for the exploitation of our rich natural resources. This large-scale capitalistic industry with machines and motive power and with an elaborate division of labour began to be introduced after the middle of the nineteenth century. But the earlier form of this capitalistic enterprise was plantation industry started and organised by European planters in tea, coffee, jute and indigo. The increased demand for raw materials led to the introduction of plantations. Up to 1833 the apprehension and apathy of the E. I. Co. had prevented English enterprisers from settling on the land, but the abolition of slavery in the West Indies in 1833 disorganised the sugar plantations of the islands dependent as they were on slave labour and there followed an export trade in sugar from India. The cheap Indian labour attracted a large number of planters. *Jute* had been exported from India by the E. I. Co. since 1795 as a substitute for hemp but it was only after 1833 that jute manufactures were developed in Dundee etc. The growing trade in feed grains and raw materials created a very brisk demand for

bags and stimulated the jute trade. The Crimean war in 1856 cutting off the Russian supplies of hemp and flax gave it a further impetus. Therefore the jute plantations grew up. From 1854-63 the average annual export of jute from Calcutta was 967,724 cwts. and by 1872-73 it was worth £4,500,000. *Coffee* planting began in S. India in the Wynaad in 1840 and in 1862 there were 9,932 acres under cultivation but in 1865 this acreage increased to 14,613 and the exports in 1860-61 were 19,119,209 lbs. In Coorg the planting of coffee began in 1854 and by 1870 there were 73,306 acres under cultivation. But the greatest success of the plantation industry was noticeable in *tea*. The E. I. Co. had begun tea planting in 1834 and gave 2/3 of its gardens to the Assam Tea Co. First private garden was started in 1852 and by 1858 there were 50 of them. The development became very rapid in the sixties. In 1850 the only tea estate was that of the Assam Tea Co. comprising 1,876 acres and yielding 216,000 lbs; by 1870 there were 295 gardens with 31,303 acres yielding 6,251,143 lbs of tea. But by 1872-73 the plantations covered 304,582 acres and yielded 14,670,171 lbs. Then there developed the *indigo* plantations in Bengal on account of the demand of the navies but on account of constant quarrel between the planters and the tenants the industry was shifted to Bihar and U. P. Although the plantations began with the E. I. Co. they became a commercial success only after the development of the railways after the assumption of responsibility by the Crown.

The close of the period saw the birth of the two most important industries of the country today, viz. *cotton and jute* in Bombay and Bengal; and gradually towards the end of the last century and the beginning of the present there were developed other industries like coal mining, iron and steel, engineering, mica, manganese, gold, cotton gins and presses, rice husking, oil mills, flour mills etc. But for the development of capitalistic industry the development of joint stock enterprise and of banking and credit facilities were essential and these

also came into existence in the same period. The fall in the price of silver after 1873 and the consequent dislocation of exchanges caused a disorganisation in finance and export trade, but after 1893, when the free coinage of silver was suspended, the stability of exchange gradually came into existence. Then in the first decade of the present century the fervour of the Swadeshi movement brought into existence a number of industries and the use of machines and mechanical power. Between 1905-1913 there were good harvests, exchange was stable and the curve of prosperity was ascending. There was a mushroom growth of banks also and thus a boom in industrial activity and in the establishment of joint stock enterprises and companies set in. But the banking crisis of 1913-18 involving in it a very large number of Indian joint stock banks gave a rude shock. The war however on account of rise in prices and the shutting off of the foreign supplies of manufactures, gave a fillip to iron and steel, cotton and jute, leather and paper and mining industries. Then after a setback in the postwar depression, large-scale industry grew rapidly in the wake of the policy of discriminating protection after 1923. However, our industrial development in the period has been by fits and starts and has affected the various parts of the country differently. It has led to the importation of foreign capital and enterprise and rapid exploitation of the rich natural resources. It has created vested interests which have consistently opposed the political and economic emancipation of the country.

Indian Vs. English Industrial Revolution : A comparison of the Industrial Revolution in England and India brings out in bold relief the chief points of contrast between the two. The revolution in England was a ripening of natural conditions and grew from within, whereas in India it has been imposed from without and has taken indigenous industries and agriculture unawares. Secondly, the revolution implied in England fundamental changes in the methods and technique of production and distribution in both agriculture and industry whereas in India

it has not affected the agricultural practice in any radical way nor has it changed the essentials of those indigenous arts and crafts, which have survived its onslaught. Thirdly, in England the revolution affected first of all cotton and then other textiles and then metallurgical and mining industries and ultimately transport, in India on the other hand, it was the revolution in transport which came first, was more important and caused fundamental and far-reaching changes in the nature and extent of trade rather in the production of either extractive or constructive industries. Fourthly, the revolution in manufactures, mining and metallurgical industries in England absorbed the displaced labour in the domestic industries and agriculture and caused a stream of migration to foreign countries for colonisation and settlements, but in India there has been no such absorption of displaced artisans and handicraftsmen by growing factories because the machine made goods which competed with their products did not come from India but were imported from abroad. Fifthly, it led to rural depopulation and an immensely increased urbanisation of the population and its concentration in industrial towns and centres in England; but in India it has led to a progressive ruralisation and untold suffering to the artisans. Sixthly, the revolution left England a very prosperous and powerful maritime and industrial power, in fact, it made England the workshop and the forge of the world, but in India it has retarded industrial development and destroyed the material prosperity of a large number of independent artisans and increased the intensity and extent of famines and famine relief. It is true however, that the handicraftsmen in England also suffered great hardships in the transitional period and the attitude of the Government was one of apathy towards them as in India and of encouragement to the capitalists.

Nineteenth Century India and Sixteenth Century England

The mass of the Indian people are still mainly agricultural, inarticulate, unorganised, uneducated and isolated. In fact economic conditions in India at present day remind of England of the

sixteenth and early 17th century. England in this period was not merely an agricultural country but was just beginning to have an intensive system of cultivation with a specialised production of wool. She was enclosing her scattered strips into compact holdings which is the great problem confronting India today with its scattered and fragmented holdings. She was weaving her wool into cloth on a large scale just as India is making her cotton into piece goods. Only English merchants were trying to concentrate the workers in workshops and the recent Indian development is factory development. England was then what India is today an exporter of mainly surplus food grains. The coal and iron of England were still undeveloped as that of India in 1880. Although both possess great natural resources, England was progressing orderly as India did under the British rule in the 19th century. England suffered from famines and scarcities in the same way as India is liable for scarcities today. English 16th century roads were earthen tracks impassable in winter, English Industry was organised in guilds and foreigners, Germans and Italians, carried on the bulk of her overseas trade. Similar is the case in India in the 19th century. She was supplemented by her common Law with Roman Law then, much of the Indian code has been supplemented by English law in 19th century, both countries adopting legal formula more suitable for an industrial-commercial state. The analogy however, can not be carried too far as it is impossible to compare a small population with a large one, differing in race, language, colour, religion, mode and habits of living, in outlook on life, customs and traditions. Great diversities of races, languages and climatic conditions which separate India did not exist in England, nor did the English ever have the same sense of values as Indians whose outlook on life is essentially noneconomic. The Christian religion has insisted on the value of work; and the western people are induced strongly with the idea of getting on which is absent in India. But the transition from the mediæval to the modern, from a self-sufficing local basis to that of world

exchange, from payments in kind to currency, from economic chaos to order, from agrastie serfdom to peasant proprietorship, are parts of the fascinations of the economic history of India in the 19th century as they are of England of the sixteenth century. ,

CHAPTER IV

Famines and Famine Relief

If the monsoon fails, there is "a
lock-out in the agricultural industry"

—Knowles.

It was pointed out in the second chapter that a very notable feature of the village economic organisation was scarcity, frequent famines and high prices alternated and punctuated by plenty and depression. Famine had been in the past, and is to a less extent at present, a prominent feature in the normal economic life of the people. Famines were common formerly in other civilised countries and they are so even today in agricultural and backward countries. They are terrible as a rule only in countries industrially backward like India China or Russia. But they had been recurring in India with an invisible but inevitable regularity almost every tenth year. According to Loveday, however, famines tend to recur in cycles of five years and the greater ones in cycles of 50 years. It is towards the middle and the end of each century that the most disastrous calamities have fallen upon India. The chronic credulity of the Indian in Destiny or Luck has led him to regard famines as dire visitations of an enraged God.

Famines were not unknown in ancient India. They were frequent and terrible under the Mohammedan rule. In times of Jalaluddin Khilji Mohammad Tughlak and in the year of Akbar's accession to the throne famines have been recorded with very severe effects. Two more severe famines are recorded in Akbar's reign in 1583-84 and in 1595-98. Sir W. Hunter speaking of the Gujerat famine of 1630 in his History of B. India says; "In 1630 a calamity fell upon Gujerat which enables us to realise the terrible meaning of the word famine in India under the native rule. Whole cities and districts were left bare of inhabitants." Then a Dutch merchant speaking of the then thriving

city of Surat in 1631 says that he could hardly see any living persons, but "the corpses at the corner of the streets lie twenty together, nobody burying them. Thirty thousand had perished in the town alone. Pestilence followed famine." Masses of people wandered out of their villages with their cattle and died by the way. They sold themselves as slaves and practised cannibalism. "Life was offered for a loaf but none would buy, rank was to be sold for a cake but none cared for it; the ever bounteous hand was stretched up to beg for food; the feet which had always trodden the way of contentment walked about in search of sustenance." Sir Theodore morrison, Mr. Digby, Loveday and others have further adduced historical evidence of recurrence of famines. They were frequent during the tenor of the East India Co. and were proverbially severe and devastating. According to Loveday the company was more concerned with the dividends of its shareholders than with the lives of those from whom those dividends were drawn. But under the Crown the network of protective railways and the great irrigation works have done a good deal to mitigate the severity of famines, so much so that they have entirely altered the nature of famines. It has been aptly said that the occurrence of famine now does not mean, as it meant before, a scarcity of food, but rather a scarcity of employments and of purchasing power. A remarkable progress has been achieved in famine protection and famine relief.

Features: The cardinal features of famines in India have been:

- 1) lack of food and an utter lack of employments;
- 2) a failure of crops and consequent scarcity and lack of fodder;
- 3) an outbreak of epidemics and pestilence levying a heavy toll on both human and cattle population on account of their reduced stamina.

It has been insistently remarked by all writers on Indian famines that a famine does not involve much a lack of food,

as a lack of employment and means of purchasing food. But this statement can be made without most accuracy and precision only with regard to the period between 1860-1900 of the British rule when the spread of the railway net and roads had brought about an effective communication between the different parts of the country and made it possible to utilize the bumper harvest of one part to relieve the scarcity and famine of the other. Before the improvements effected in transport famine meant a lack of food as well as a lack of employment. For, as late as the Rajputana famine of 1868, people had to go without food even though they had the means to buy it, through an absolute lack of supply. The same fact is indicated by the large migrations of people from the famine districts to districts well provided with food which invariably occurred in the famines of the early nineteenth century. Because the food was not to be had in their district the people had to migrate to districts where there was an abundant supply.

Another important characteristic of a famine is the failure of crops and the consequent scarcity and lack of fodder or food for cattle which form the only substantial capital of the poor peasants. A third feature is the scourage of epidemics and other chronic diseases in its train which play havoc at the population and the cattle. Both men and cattle die by thousands. It appears that the positive checks to population to which Malthus alluded in his Essays on Population are more potent than preventive checks in our country.

But now though the railways facilitate the transport of food grains from one part of the country where they are available, to that in which the crops have failed, and to that extent the horrors of the calamity are minimised, a famine must always be a serious crisis of underproduction. It follows from this assertion that the problems of population and production are interwoven with each other and any indirect methods, however useful in themselves, to mitigate the evils of famine in India, will not solve the problem. A bold frontal attack must be levelled

at the evil and the productive capacity of the people must be raised.

Famines are necessarily recurring calamities in India against which the state must persevere in its attempts beforehand till some solution of the problem has been obtained. (The delay in the conviction of this fact was due to the total absence and insufficiency of trust-worthy statistical data with regard to the population, the registration of births and deaths and the influence of epidemic or local distress on them; and the economic condition of the people.) The absence of agricultural statistics in an accessible form was particularly notorious. A main cause of the disastrous effects of famines and one of the greatest difficulties in an effective relief provision is the dependence of the $\frac{2}{3}$ of the population, directly or indirectly on agriculture, and the want of diversity of occupations. Our agricultural industry depends almost wholly on "a sufficient and well-distributed rain fall." Hence, a failure of the usual rains deprives its labouring class not only of the food but also of the sole employment by which they can earn the means of procuring it. A complete remedy for this condition of things will be found only in the development of industries other than agriculture and independent of the fluctuations of the seasons. These considerations are of greatest weight and they are rendered more serious by the fact that the dependents on agriculture are far more in excess of the requirements of agriculture who eat up the profits that would otherwise spring from the industry of the community. It is no wonder that in a country thus situated material progress is so low and slow. The excessive subdivision and fragmentation of the holdings further aggravates the difficulty by making it impossible for people to lay by their spare produce in times of plenty for use in periods of scarcity.

Causes : The chief cause of the famine is the failure of rains. Other subsidiary causes are floods, excessive rains, locusts, hailstorms, war and pillage and chronic poverty. Indian agriculture is dependent on the regularity and adequacy of the rain-

fall at the time of the summer and winter monsoons, and thus yields two harvests: Rabi and Kharif. This rainfall is not evenly distributed over the whole of the country, or throughout the year and, what is much more serious and important, it is liable to failure or serious deficiency and causes droughts and famines. There are certain parts of the country which suffer from an excessive rainfall while others suffer from a drought. Then, except in the south-east of the country where there is heaviest rainfall from October to December, by far the greatest quantity of rain falls between June and October. During winter the normal precipitation varies from half an inch to two inches while the hot weather from March to May or June is practically rainless. Strictly speaking, therefore, there is but one monsoon sweeping across the country from the southwest in June or July and retreating again in October and December when it is exhausted and, therefore, the rainfall in winter is relatively light. Thus it is that by far the greater part of the country gets about 90% of its rainfall from the southwest monsoon which is the ultimate source of wealth of the rice producing tracts. The deficiency of the rainfall therefore spells disaster for the cultivator and the prolongation of the dry season renders vain all hopes of a rich harvest for that year. Hence it is that "in one season of the year the greater part of India is deluged with rain and is the scene of the most wonderful and rapid growth of vegetation; in another period the same tract becomes a dreary, sunburnt waste." It is however the liability to failure or great deficiency which is more dangerous. The average annual rainfall over the whole country is 45 inches but local variations are very great. One year in every five is expected to be dry and one in every ten is a year of severe drought. Only those parts are free from this vagary of the climatic conditions which are provided with perennial canals for irrigation. Tanks or wells dry up in periods of severe droughts. It is the vast size and the varying altitudes of the country which do not allow a famine to envelop the whole of the country and be more terrible. As Loveday

puts it "History gives no example of a drought extending over the whole of India; and meteorologists declare such an event impossible." Thus it is that irrigation and development of means of communication prevent the locality from suffering from a food famine now and decrease the fatality of local deficiency.

Of the contributory causes there are some which seem to be irremovable e. g. floods, hailstorms, locusts etc.; while others like poverty, chronic indebtedness and insecurity can be removed and have been gradually mitigated in their fatality by the improvement of economic and social conditions. Of these the outstanding fact is the extreme and chronic poverty of the teeming millions in the rural areas. This poverty however is more a question of production than of distribution of wealth and there is close relation between this poverty and famine which react on each other. War, plunder and pillage which were rampant in the period of insecurity after the fall of the Moghul empire have been removed with the establishment of the British rule on a firm footing and are therefore of no importance now as subsidiary causes of famines. But the administrative, legal and economic changes introduced by the British rule and the increased security leading to an enormous increase in the population during the period of transition increased the severity and intensity of the famines during the last century. They affected most seriously the same sections of the population which were very badly hit by the famines. The insecurity of land tenure, the destruction of the home industries, and increased pressure of population on land, the commercialisation of agriculture and unproductive expenses on conventional necessities and the consequent increased indebtedness and poverty multiplied the numbers of those who sought relief during famines in the period of transition. But now with the railways facilitating the distribution of food, the extension of irrigation facilities increasing the product of the land and freeing large areas of land from dependence on rainfall, the study of scientific agriculture raising the capacity of even

dry parts, and the accumulation of some reserve by the peasantry out of the prosperous years against the rainless days, the growth of the cooperative movement, and the development of nascent industries absorbing about 10% of the population and to that extent relieving the pressure on the soil, and above all the perfection of the famine relief and insurance, the famines have become less severe in their fatality.

History: The dividing line in the history of famines under the British rule comes at the famine of 1860 when the gravity of the problems of famine and the responsibility for famine relief were first realised by the Government and the main foundations of the modern famine relief organisation were laid down. For a century from 1760 when the great Bengal famine occurred upto 1870 most of the attempts at relief were only partially successful. The East India Company had neither the necessary information of the local conditions, nor the organisation and officials to combat the scourge of the famines on such a wide scale as is done now. The absence of suitable means of communication and transport was the chief difficulty in alleviating the distress and saving lives from destruction. Moreover, it was a period of political unrest and transition.

The year 1860 saw a big famine in N. W. Provinces, Punjab and Rajputana. Then came the Orissa famine of 1865-67 which was very terrible and relief was hampered by floods. It affected 180,000 sq. miles and 47½ million people. The government was rather slow to appreciate the necessity for action and relief operations began actually when the resisting power of the people had been weakened, 35m. units were relieved (a unit is one person supported for one day) but inspite of an expenditure of 14½ million rupees about a quarter or one-third of the population of Orissa died. This was followed by the Madras famine of 1866 and the Rajputana famine of 1868-70 which was followed by a plague of locusts. The absence of railways accentuated the suffering and all the features of an old famine were noticeable. It was perhaps the last famine in which there was

scarcity of food. About $6\frac{1}{2}$ million pounds were spent on relief although the area and the number affected were small. The great peculiarity of this famine was the migration of 1 m. people out of the total population of $1\frac{1}{2}$ m. from Marwar to the neighbouring provinces. The combat against famine was aggravated by the lack of information as regards crops and supplies and the government was left with one lakh tons of rice on hand. Then famines followed quickly each other. First was the famine of Bihar and Bengal in 1873-74. On an average about 26% of the total population affected were relieved and in some cases the percentage rose to 50 to 70 per cent. No death from starvation took place. Relief was granted on a very lavish scale and $6\frac{1}{2}$ million pounds were spent, and 5,526 souls were dispatched at a cost of Rs. 19 per head to Burma. The importance of this famine lay in a new incentive towards greater administrative efficiency, and in the initiation of a famine insurance scheme proposed by Sir John Strachey. Then came the great famine of South India in 1876-78 which in the second year spread from Madras, Mysore, Hyderabad and Bombay to parts of C. P., U. P. and the Punjab. It affected an area of 257,000 sq. miles and $58\frac{1}{2}$ million people. This famine marked the actual point of transition to modern economic conditions. The extravagance of the Bihar famine cautioned the government to adopt economy and efficiency as its goal of famine relief and the principle of saving life at any cost was given up. Import of grain on government account was given up and trade was left entirely to private enterprise. The outlying districts were not supplied with corn by the private traders. An attempt was made to supply 400,000 men with small decentralised works and thereafter larger works were undertaken. A sum of Rs. $8\frac{1}{2}$ crores was spent to relieve 700 million units and charitable contributions from the colonies and G. Britain amounted to Rs. 84 lakhs. Still $5\frac{1}{2}$ millions died in the British territories alone. This marked the dividing line so far as the organisation of famine relief was concerned. Famine Codes were drawn up which

with necessary modifications form the basis of the modern famine relief organisation, the government gave up its policy of laissez faire and a Famine Insurance Fund was created. Then came the great famine of 1896-97 which affected 307,000 sq. miles and 69½ million people. Its severity had been increased by an absence of any reserves with the cultivators on account of droughts and their power of resistance had been lowered by the rise in prices without any rise in wages. A loss of 18 to 19 million tons of corn was estimated, the number relieved were more than 4 million, cost of relief was Rs. 7½ crores, the revenue remitted was 1½ crores, loans given amounted to 1½ crores and charitable relief by private sources amounted to 1½ crores of which 1½ crores were subscribed in the United Kingdom. Famine mortality was 750,000. The experiences of this famine were examined by the Lyall Commission but before its recommendations could be digested and people could recover from the shock of the famine, another famine of unparalleled severity occurred in 1899-1900 on account of unprecedented droughts over a large area. It affected 475,000 sq. miles and 59½ million people in C P. and Berar, Bombay, Ajmer and the Hissar district of the Punjab, as also in Rajputana, Baroda, Central India, Hyderabad and Kathiawar. The rainfall over the whole country was 11 inches below the mean, there was a great fodder famine and terrible mortality among the cattle; water supply was deficient. Even Gujarat which was supposed to be immune from famine was affected and a very large number of Marwaris migrated from their impoverished land into Central India and complicated the problem of famine relief. The responsibility for saving life in famines was shouldered by the Indian states also after this famine. Another important feature of this famine was the flocking of the people in unexpectedly large numbers to the relief works. The expenditure in 1896-98 was over £5 million while that in 1899-1901 was over £6 million beside charitable grants and loans to the native states. The railways carried 2½ million tons of grain to the famine-stricken

areas and for weeks together 6 million people were in receipt of relief. The difficulty of carrying fodder by the railways caused a very heavy mortality among the cattle. The experiences of this famine were examined by the Macdonnell Commission which evolved the doctrine of putting heart into the people and introduced payment by result in the famine relief organisation. About one million people died as a result of cholera and malaria which swept across the country after the famine. The government was violently attacked by the people for these famines and their land revenue policy and the drain of wealth from India to Britain were cited as the chief causes of the famines. The government policy after these famines changed. There was increased government activity in the development of agriculture by introducing and demonstrating scientific agricultural methods, by inaugurating cooperative credit societies, by constructing canals and tanks and by developing railways, by diffusing primary education and encouraging the development of industries. All these improvements led to the increased power of resistance among the people. The truth of this statement is borne out by the experiences of the later famines. In 1907-8 a famine occurred in the U. P. affecting 50 million people and involving a failure of food supply for nine months. But the loss and suffering were small and a very few people flocked to the relief works. Takavi loans were given freely and large numbers were relieved in their villages. The same was the case with the Bombay and Gujerat famine of 1911 and again with the U. P. famines of 1913-14 and 1918. In the latter case rains failed more seriously and over a wider area than during any monsoon in the recent history of India. The deficiency in the rainfall was more marked than in the great famine of 1899." Yet the resisting power of the people had developed to such an extent that not more than six hundred thousand were in receipt of public assistance at any time, and the shock to the social life of the community was insignificant. In all these cases Takavi loans were given, industrial and public works provided alternative employment for the labour whose mobility had been

immensely increased with the development of railways and roads, wages had risen and the resisting power of the people increased, self help and moral strength had been imparted through cooperative societies, and irrigation works had extended after 1900 and emigration had been encouraged. Hence the improvements in the economic conditions of the country had increased the resisting power of the people and helped them fight the famine with courage. This fact was more effectively demonstrated in the famine of 1920-21 which affected Madras, Bombay, C. P. and Baluchistan as also parts of Punjab, O. I. and Bengal. But the largest number of people on relief was very much less than 3 % of the total population affected i. e. 46 million. Thus as Mrs. Knowles puts it "With a population more mobile, better fed, and with increased capacity for self-help, with the great demand for labour in factories, mines, and plantations and with a well-organised system of railways and extensive irrigation works, it is expected that the famines of the past will not recur again with such devastating effects. The British government in India has famine by the throat."

Results : First of all the government was compelled to give up its policy of laissez faire and to adopt an attitude of paternalism. The insecurity of agriculture due to the vagaries of the monsoons coupled with the chronic improvidence and indebtedness of the masses necessitated the parental assistance of the government. As one writer has put it "Where a numerous and increasing peasantry lives on the margin of subsistence, paternalism is inevitable, no matter whether it be termed democracy or autocracy. Where irrigation on a large scale..... is practised, there, inevitably, some higher power must step in to erect the works, secure a steady supply of water, study the effect as a whole and dole out the water fairly. Autocracy and large scale schemes of irrigation go hand in hand." Thus, in the words of Mrs. Knowles "the government plays the part of economic Providence in India to a degree that is not attained in the self-directing regions." Secondly, the importance of railways

was greatly accentuated by their utility in relieving famines. The desire to combat famines was one of the most important points stressed by Dalhousie in his famous minutes on railways. The famines, therefore, stimulated the development of public works and general economic improvement. The period of the transition which synechronised with the period of the intensity of the famines saw a rapid development of railways whether they were commercially profitable or not. The railways changed the nature of famines; they ceased to be food famines. Thirdly, the famines led to the launching of remarkable schemes of irrigation of both productive and protective types, the completion of which led to the securify of many areas against droughts, and by increasing the products, increased the staying power of the cultivating millions. It was to mitigate the baneful effects of famines—pestilence, devastation, human and cattle mortality, epidemics and inhuman practices—that the government adopted these measures of security and improvement. Fourthly, the famines caused necessary adjustments in the land revenue and led to the developmont of scientific research and improvement of agricultural methods to increase the yields of crops. The general conditions of labourers were also considered to develop their power of resistance. Fifthly, the famines caused the creation of a famino relief organisation which led to the collection of statistics regarding crops, soil, etc. Sixthly, to protect the peasantry and the small artisans and traders against the tyranny of monoylonders in the periods of scarcity a number of laws were passed and the cooperative credit movement was organised to put heart into the people and create a moral stamina in them. Seventhly, the famines gave an impetus to the mobility of persons and led to migration not only within the country but also outside it. Finally, to prevent famines, the standard of living was to be raised by improving the agricultural methods and by encouraging and even initiating industrial enterprises like factories, plantations and mines to provide an alternative occupation to the growing population

and thus relieve the pressure on the land. In short, the famines led to the extension of governmental functions and responsibilities considerably.

Famine Relief Organisation

In a vast country like ours with its teeming millions dependent on a precarious industry like agriculture for its sustenance, the problem of famine relief is very difficult. Its vastness and suddenness is further aggravated by the multitude of the problems to which it gives rise. The existence of small holdings, chronic poverty and indebtedness of the peasantry weighted down by custom and family obligations, poor and illiterate, and whose stamina is sapped by malaria, cholera, plague and other epidemics, stultify all talk of progress and make the problem of relief very complex.

The chief problems of famine relief are the supply and distribution of food for different types of men and women involving the problem of regulation of trade and export in grain, the supply of water to drink, the problem of saving the cattle so indispensable to the cultivators and of fodder supply, the provision of medicines, the grant of takavi loans for the relief of those who cannot come to the rest works and poor houses opened for the relief of the poor, the remission of land tax and administration of railways and canals, the maintenance of balance between economy, generosity and promptness, the method of payment for the work done, and above all, the restarting of the agricultural life by making arrangements for the supply of seed and cheap credit.

In olden days there were no railways and roads to facilitate the distribution of food, irrigation facilities were very deficient and were themselves dependent on the rainfall,³ and the people had not much of reserves and credit with them. So in famines they died in very large numbers. The system of relief in those early times was very much different from the modern system. The absence of swift and safe means of communication and

transport made it impossible for the rulers to import corn in adequate quantities to supply food to the destitute. Moreover it was difficult to bring into existence an administrative machinery all of a sudden to cope with the distribution of supplies and the organisation of labour. Wars and the absence of modern transport facilities also limited exports and the surplus stored in the years of plenty was the only protection against droughts. According to Loveday the Mohammedan rulers maintained stores of grain in their capitals as war chests, and the cultivators kept what surplus they could from years of plenty as an insurance against those of dearth. The scale of the relief depended on the generosity and benevolence of the rulers and the severity of the scourges. Accordingly the corn was given away in charity or sold. Sometimes there was no corn to sell and at others people had no means to purchase. Muhammad Tughlak had the credit of being one of the first to adopt vigorous measures of relief in 1343 in his dominions. He distributed food for six months to the people in Delhi and made advances for the cultivation of land and for the digging of wells.² A general system of compulsory labour was also tried but failed and people migrated to Bengal. Then in the great famine of 1630 Shahjehan ordered the distribution of 5000 rupees on every Monday to the deserving poor, and of 50,000 rupees in Ahmedabad where the famine was more severe. Food was doled out and taxes to the tune of 70 lakhs were remitted.³ Relief was not confined to the capital only and officers were ordered to provide soup kitchens and alms-houses in various places outside. The practice of providing cooked food was in vogue even earlier as also increased recruitment to the army to provide employment to the poor; but they were limited to the capital towns only. Similar measures were taken during the reign of Aurangzeb. According to Ferishta, as early as 1396 Sultan Mahmud kept a train of ten thousand bullocks on his own account constantly going to and from Malwa and Gujerat for grain, to supply his stricken kingdom of Bahmani. But with the removal of internal taxation, actual transportation by 1630 was left to private

traders. In 1660 Government directly bought corn to sell to the people at cheap rates and remitted taxes and rents. Migration was also the most usual method adopted by people to protect themselves against the distress of famines. Thus as Loveday says "The migratory habits of the past had maintained, and, above all, the principle of mutual assistance and family support of the aged and weak, were the real bulwarks in the past against the perils of destitution and the ravages of starvation." Besides these, however, the development of irrigation facilities had been adopted since times immemorial as a preventive measure against famines by all governments. The great Moghuls constructed canals and the Hindu rulers constructed tanks and wells. Thus the provision of irrigation facilities to protect the land against drought and the storage of grain were the two main protective measures which could be adopted when the importation of food was dependent upon cattle which suffered equally with men from lack of food in famines. Relief measures consisted of the distribution of charities, establishment of alms-houses, free distribution of food or sale of corn by government depots and remission of taxes and rents.

The East India Company took up the responsibility of famine relief since 1770 and administered it through native agency. The methods adopted by the company in the famine of that year were very inadequate and consisted only of embargoes on export and removal of duties on import and prohibition of hoarding in Calcutta and the actual relief was left to the generosity of private individuals who contributed £ 15,000 for purchase of corn and £ 3,000 for general charity. It refused to make any adequate reduction in the land tax. In 1783 a committee of grain for the districts of Bengal was set up to control trade and prices and to start granaries at convenient moments. Hoarding and restrictions of sales were declared to be unlawful and exports were restricted. This undermined trade and starved the province of Madras. Liberal contributions of charity were made and about 9,000 starving people were deported to the

districts of Madras. In subsequent famines of the decade trade was left to private enterprise but sale prices were fixed and doles were given to the poor. ³Extensive remissions of land revenue were also made by the native government. In the native states the old principles of relief continued unabated in their essentials.

Since the beginning of the nineteenth century new methods of relief were adopted. In addition to embargoes on exports and encouragement of imports, relief works were started (construction of tanks, wells and a road to Thana in 1803) ²and temporary hospitals were built in Bombay and other places under the Company, ⁴revenue was remitted and in 1804 large grants of takavi-loans were made to the cultivators. So far, however, no general principles of relief had been formulated. ⁵By the beginning of the second decade free trade principles were adopted. ¹By 1837 the growth of British power had led to the establishment of a strong centralised administration and thereafter a more liberal and courageous policy of relief was followed. The able-bodied were provided with work on the roads or other minor works; those who were unable to work were given direct relief but on account of adulteration of flour with lime and sand many people died in 1857. ⁷Burdensome duties were levied on internal trade and the neglect in remission of revenue caused many cultivators to flee. ⁸Before the company was abolished in 1858 it made one improvement in its administration of relief and it was that the management of road construction undertaken as relief works was placed under an expert engineer. *Thus, we find that the East India Company distributed charitable relief, prohibited the export of grain, imported grain on its own account, but on account of great difficulties of transport very large number of lives were lost. Its policy was however uncertain and tentative.* ✓

The system of modern relief organisation were formulated for the first time in the year 1860. The famines from now also differed from the older famines. They were as said

above, now no longer famines of food, as of scarcity, of mean of purchasing, and unemployment. The development of irrigation and railways in the decades preceding led to the method of alleviation being made more elaborate and detailed. The germ of the modern famine codes were laid in that year. The essential features of the new policy were:—

- ✓ (a) Classification of the population into three grades
- (b) moral strategy; and (c) village relief.

The population of the stricken area was classified into those who were able-bodied and could work in large public undertakings, those who were poor and deserved charity but who were required to do some work out of moral considerations in poor houses in which they were maintained, and those who on account of their castes, old-age or decrepitude were not able to leave their villages. The first class was organised into gangs of 500 housed in temporary sheds and set to work on canals or roads. The second grade people, after a careful enquiry into their poverty, were divided into various groups according to their physical fitness and put to light works in the poor-houses. The third group was given help through the Deputy Collectors and Inspectors in their homes. These were the cardinal features of the famine relief organisation adopted in 1860 which *mutatis mutandis* has continued to the present day. The failure of the famine relief during the Orissa famine of 1865-67 due mainly to the dilatoriness and the incapacity of the authorities to anticipate the distress and to the series of mistakes committed by them led to the appointment of an enquiry committee under Sir George Campbell whose report formed the basis of all subsequent codes. As a result of this report the government issued a memorandum in 1868 detailing the measures to be adopted in times of famine. The Rajputana famine which began in that year afforded an opportunity of testing these measures. In order to regulate the import and sale of grain and to organise relief to the destitute an Executive Committee was set up instead of central works district works were undertaken and

village relief was distributed through the agency of headmen. The main principles of relief organisation were similar to those of 1860 but the most important departure was the adoption of the principle of distributing *takavi* loans to the farmers to enable them to cultivate their fields. The government imposed the responsibility of saving lives on district officers but insisted on the maintenance of the sick and the aged by the members of their family. But both of these things had to be given up. "The principle of self acting acts was given up and that of individual inspection was adopted." "The enormous system of administrative control, entailing the division of whole Presidency into a complex system of relief districts and circles of village groups, which this principle of personal touch with the people entailed, was too overwhelming a task to be successfully and economically carried out at the time. But it is a system now incorporated in every famine code." The large poor houses which in the Orissa famine led to the "utmost demoralisation" were also given up and more healthy and sanitary institutions of not more than 50 souls were started instead. The lack of information regarding crops and social conditions of the districts affected led to an administrative inefficiency and to the initiation of a famine insurance scheme. It was not till after this famine that the government realised that famines could not be looked upon as abnormal and exceptional calamities and began to provide against the grave financial burden, which they imposed, out of the state revenue. The proposal was, however put into practice only after 1877 when one of the most severe famines in history had rocked a very wide part of the country. This year marked the actual transition to modern conditions. The main policy of the government was laid down in the following words 'the task of saving life irrespective of cost, is one which is beyond our power to undertake. The embarrassment of debt and weight of taxation consequent on the expense thereby involved would soon become more fatal than the famine itself. In other words, the government adopted their policy of regarding the famines

as an economic question which could be foreseen and insured against out of an annual charge on the government revenues. Henceforward a sum of £1,000,000 or Rs. 1½ crores was annually set aside by the central government for famine insurance, and the necessity of being ready to meet a famine was realised, ✓

When it came to the execution of the policy laid down by the Government in the words quoted above, the practice differed in the various parts. Madras for example imported grain but on the advice of the Central Government left trade to private traders. In Bombay however, relief was promptly and efficiently organised. The whole population was divided into four classes: the able-bodied were provided with work by the Public Works Department; the less capable were left to the control of collectors on smaller undertakings; those who were feeble were provided with light work in their villages; and the sick and the infirm were nursed in public nurseries. The experiences of this calamity were examined by the Strachey Commission in 1880 and its recommendations led to the formation of famine codes in 1883. It emphasised the need for anticipating famines and being prepared for them beforehand, insisted on Government directly taking steps to organise famine relief, as a famine was a calamity wholly transcending individual effort and power of resistance. In administering relief care had to be taken that indiscriminate charity did not demoralise the people, hence it recommended *Labour Tests*. As a means of protection against famines the commission urged the extension of irrigation, and made definite suggestions as to the lines of railways to be constructed. Encouragement of a diversity of occupations through indirect means only was also recommended. With regard to famine relief proper they recommended that employment should be given to the able bodied at a wage sufficient to support and maintain efficiency and immediately before lack of food had weakened the efficiency; that gratuitous relief should be given to those who were unable to work

in their villages or in poor houses; that food supply should be left to private enterprise except where it was unequal to the demand put upon it, and that land-owning classes should be assisted by loans and by suspensions of revenue demands in proportion to crop failures. To control the whole organisation and to collect information and statistics a special department was to be created. With a view to efficiency and promptness special emphasis was laid on village relief and on care to avoid the weakening of the village system and the joint family, and the responsibility of investigating distress and of feeding those who were unable and sending those who were able to the revenue officer's station was laid on the village headman. Poor houses were to function only as a second line of defence.

In sending the famine codes to the provincial governments the Government of India laid down "that the famine wage is the lowest amount sufficient to maintain health under given circumstances. Whilst the duty of Government is to save life, it is not bound to maintain the labouring population at its normal level of comfort." On the basis of this circular provincial codes were drawn up and the soundness of these was tested by the famine of 1897. The Loyal Commission which examined the experiences of this famine in 1898 testified to the success achieved in saving life, to the greater relief of distress than in previous famines, and to the moderateness of the expenses incurred. The free grants of takavi, prompt offer of employment, and extension of gratuitous relief pointed to the wisdom of the most important recommendations of policy made by this Commission that *ultimate economy would be better assured by greater generosity*. It had also recommended that grants should be made for the repair of wells and the permanent security of Kharif crops; and that labour should be concentrated in large relief works. The Commission found that the resources and famine resisting power of the people had increased.

The great famine of 1899-1900 was examined by the Macdonnell Commission in 1901. It reviewed the whole question of famine relief and famine protection and recommended the establishment of agricultural banks, suspension or remission of land revenue when necessary, ²permanent exemption of improvements from assessment and ⁴the making of taqavi loans on easier terms. With regard to the administration of relief in the preceding year its findings were that relief was excessive. ⁵It recommended the extension of the principle of decentralisation and local relief and of smaller works. The cardinal feature of their recommendations was however moral strategy i.e. the creation of a spirit of self-reliance and resistance. Laying emphasis on the fact that if the people were helped at the start they would help themselves and that if their condition was allowed to deteriorate it proceeded on a declining scale, they placed the doctrine of 'putting heart into the people' in the forefront of their programme of relief. The machinery to achieve this object was a policy of prudent boldness started from the preparation of a large and expansive plan of relief and secured by liberal preparations, constant vigilance, and a full enlistment of non-official help, by a prompt and liberal distribution of taqavi loans and early suspensions of revenue. The wage scale was revised, minimum wage was abolished for able-bodied men, payment by result was recommended as also saving cattle from starvation and death.

The *modern system of famine relief* has thus gradually developed into a science of famine relief and is embodied into the famous famine codes the most important of which are economy and generosity, labour tests, poor houses, village gratuitous relief and moral strategy. Besides the gradual perfection of the famine relief organisation and machinery, famine protection has also been developed by the construction of railways and canals on both productive and protective principles. For a continuous development of protective works the Famine Insurance Grant of 1½ crores of rupees annually was instituted

as we have seen above in 1878. The first charge on this is famine relief, second protective works and third avoidance of debts. The chain of protective railways' is now complete and very great progress has also been made in the development of protective irrigation especially in the Bombay Deccan, the Central Provinces and in the Bundelkhand areas. Under the Statutory rules of the Government of India Act 1919 all the provincial governments except those of Assam and Burma are required to contribute every year a fixed sum from their resources for expenditure on famine. This annual sum can be spent only on famine relief and the sum unutilised is carried to a permanent Famine Relief Fund which is invested with the Central Government and is available for expenditure on famine, and under restrictions, on protective and other works for relief of famine.

Outside the government machinery there has always been a very encouraging response from private philanthropy in the supply of clothes, food, money, help to the superior class poor who do not go to the government for help and in the rehabilitation of agricultural life after the famine. This help is not only confined to the people of the country but outsiders have also contributed handsomely notably from U. K. and U. S. A. In the recent famines the Congress as the most dominant non-official organisation has played a very useful part in relieving famines and distress caused by natural calamities. With a view to form a permanent fund for relief the Maharaja of Jaipur paid in 1900 a sum of Rs. 15 lakhs in Government Securities to be held in trust for relief in times of general distress. In a few years this amount increased to, Rs. 23,10,000 and in 1934 'The United Provinces Famine Orphans Fund' was also transferred to it. It now amounts to Rs. 32,78,400 and is officially called the Indian People's Famine Trust, the income of which is administered by a committee of 13 members representing different provinces and states with the Indian Auditor General as its secretary and treasurer. The trust is permanently

invested and the principal is never spent. The income from the investment alone is spent on relief of famine or distress and the unspent balance is temporarily invested in government securities. With the economic development of the country in recent years, however, the expenditure from the trust on famine relief actually in the old sense has declined very much but very large sums of money are granted in times of distress due to floods or earthquakes as in 1929 and in 1934 and 1935. The increased mobility of men and goods due to the spread of the railway net, the increased resisting power of the people due to high prices of agricultural goods before 1929, and the favourable balance of trade, the remarkable growth of irrigation facilities in precarious tracts and in others leading to increased production, the growth of cooperative banks and general banking facilities and the development of manufacturing industries absorbing the surplus population and a more scientific method of famine relief and scientific agriculture have entirely changed the nature of famines and minimised their horrors and have saved the economic and financial machinery from going out of gear. Famine, therefore, is now efficiently met by liberal grant of takavi either directly or through cooperative banks, by suspension and remission of land revenue, and by provision of charitable relief for the poor and the infirm, and by provision of cattle fodder and assisted migration.

'In ordinary times government is kept informed of the meteorological conditions and the state of the crops; programmes of suitable relief works are kept up-to-date, the country is mapped into relief circles, reserves of tools and plant are stocked. If the rains fail, policy is at once declared, non-officials are enlisted, revenue suspended, and loans for agricultural purposes made. Test works are then opened, and if labour in considerable quantities is attracted, they are converted into relief works on code principles. Poor houses are opened and gratuitous relief given to the infirm. On the advent of the rains people are moved from the large works to small works near their villages,

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liberal advances are made to agriculturists for the purchase of plough, cattle and seed. When the principal autumn crop is ripe the few remaining works are gradually closed and gratuitous relief ceases. All this time the medical staff is kept in readiness to deal with cholera which so often accompanies famine, and malaria, which generally supervenes when the rains break."

CHAPTER V

Indian Agriculture and its Problems

Its Place in our National Economy :

The economic significance of agriculture to India can hardly be exaggerated. It is the premier industry of our country; no less than 73% of its enormous population is directly dependent on agriculture and pasture for its sustenance or livelihood; and normally after meeting the demands of the entire population for all agricultural commodities except cotton and till recently sugar, a large balance of the output is annually exported. It provides all the food grains consumed in the country and in normal years leaves a moderate surplus for export. It provides raw materials of industry like cotton, jute, sugarcane, oilseeds etc. It yields a very large crop of cotton, about half of which is worked up in the country, while the other half is exported. It provides the jute supply of the whole world, and gives a large crop of oil-seeds, which not only satisfies the whole demand of India, but leaves a large and valuable surplus for export. It contributes some 40% to the total supply of tea to the world's markets, and finally it provides the whole of the raw sugar consumed in the country, which is roughly seven times as great as the quantity of refined sugar imported till recently. Since the beginning of the present decade the sugar manufacturing industry has progressed under a protective tariff by leaps and bounds and has made India virtually self-sufficient as regards refined sugar as well. Thus it is that India feeds and to some extent clothes its population from what 2/3rds of an acre per head can produce. There is probably no other country in the world where the land is required to do so much. Bengal supports 646 per sq. mile of the total area, Germany 311, and France 189. According to Sir M. Visvesvaraya India has only 3.5% of the total area of the world, while her population is 17% of the world's population i. e. in area India stands

seventh in the list of countries of the world and in point of population she was hitherto considered second only to China, but now she heads the list of all countries in the world in number of inhabitants.

Industry is the handmaid of agriculture. Even in their advanced stages of economic development peoples have to depend primarily on the genetic and extractive industries for the supply of raw materials and of these agriculture is the most important. And especially in a country like India where every three out of four persons depend on agriculture, the overwhelming importance of agriculture in our national economy cannot be overemphasised. Agricultural prosperity spells industrial and commercial prosperity and agricultural decline means decline in industry and commerce as well. Agriculture not only affects the life of the masses but its importance is also reflected on the finances of the Central and the Provincial governments. The Provincial governments lose money either through a remission or suspension of land revenue. The central government through decreased earnings of railway or lower customs income also shares the loss. Lord Curzon aptly remarked that the Indian Budget is a gamble in rains. That sums up very pithily but pointedly the supreme significance of agriculture in India. If the agricultural industry is prosperous, larger exports mean enhanced purchasing power of the teeming millions. The increased purchasing power means a better market for manufactures whether indigenous or foreign. An idea of the importance of agriculture in India can be obtained from the value of the products raised from land. Sir M. Visvesvaraya computed the total agricultural production of all-India in 1921-22 at Rs. 2,032 crores or about Rs. 64 per head of the population. The corresponding per capita production for the U. S. A. may be taken at Rs. 175, for Canada Rs. 213, for Japan Rs. 57 and for the U. K. Rs. 62.

Low yield & its causes :

But it is a pity that inspite of its preponderating importance

to our national economy agriculture is a "depressed industry." This is proved by the comparatively low yield per acre of various crops, which is barely one third or one fourth of the yield of other countries, and this, too, is reduced to nothing in periods of drought and scarcity. It is acknowledged on all hands that Indian agriculture, judged by "the test of quantitative production, has remained backward and unprogressive;" that it fails to obtain the yields of which the country is capable, and that there is a vast field for improvement in the efficiency of the methods. The yields of rice and wheat are poor compared with the standards of the more advanced countries. The once famous indigo industry has received a mortal blow from the competition of German synthetic substitutes; and even in the matter of food production India has now receded to the background. The quantity of food grains required for the population has been estimated at between 85 to 90 million tons per annum; but the total outturn in a normal year comes to between 60 to 70 million tons, which, on allowance being made for seed and export etc., is reduced to 50 million tons. Thus the food supply in a country which is thought to be predominantly agricultural falls far short of the demand. The average outturn of wheat per acre sown is 52 bushels in Great Britain, 22 in Canada, 16 in the U. S. A. and 13 in the Punjab. The yield in ginned cotton per acre is 200 lbs. in U. S. A., 450 lbs. in the Nile-fed regions of Egypt, and 85 lbs. to 100 lbs. in India. With half the world's acreage under sugar-cane, India's output till recently was only $\frac{1}{4}$ of the world's supply of canesugar; and the Indian Sugar Committee states that India's outturn of actual sugar per acre is less than one third that of Cuba, one-sixth of Java and one-seventh of Hawaii. The chief cause of this low production is the primitive cultivation of the land. But in addition to this the uncertain character of the rainfall, the defective methods of rural finance, the chronic poverty of the cultivator, the excessive subdivision and fragmentation of holdings, floods, hailstorms and other vagaries of the climate also damage the value of the

crops. Finally the defective methods of marketing further lower the value of the crops. With improved methods, then, agriculture in India is still capable of great increase in yield or quantity. As it is the chief industry of the country and as the success of other industries depends on the supply of raw materials, the improvement of agriculture should engage the serious attention of every thoughtful and patriotic Indian.

Need for improvements:

The necessity for the improvement of Indian agriculture is too obvious to need any comment. 'The Indian Industrial Commission points out that the present position and future prospects of Indian industries depend to a very large extent on the products of Indian agriculture. After stating most emphatically the paramount importance of agriculture to this country and the necessity of doing every thing possible to improve its methods and increase its output, the commissioners say, "We consider the improvement of agriculture necessary, not only because it forms the basis on which almost all Indian industries must depend, but also for the further reason that the extension among the people of a knowledge of improved agricultural methods, and, in particular, of the use of power or hand-driven machinery, will benefit agriculturists both by adding to their income and by its educative effect." Further agricultural progress will lead to a general rise in the standard of living which in turn, will create a much larger demand for manufactures than now exists, and thus provide a market within the country for the increased industrial activity. Besides the increase of capital, the rise in wages and agricultural profits, and the economic education of agriculturists which will result from agricultural improvement, the improvement of agriculture will mean better food, better clothing and better living to the cultivator; will enhance the national wealth and government revenue, shall usher in an era of general prosperity and shall act as a lever to the growing industrial, commercial and social development. The fundamental industry in India, as in other

tropical and subtropical countries, being agriculture, the ultimate prosperity of the teeming millions depends on its development.

The problem of the improvement of Indian agriculture is, however, not a simple one. It presents many difficulties which obviously seem to be insurmountable because of the vastness of the field, the magnitude of the task and heterogeneity of the problems and calls for a bold frontal attack. The various political, social and economic problems confronting the Indian statesmen and reformers today are irretrievably bound up with the improvement of agriculture. The problem raises the question of better and improved agricultural methods, the question of water-supply, or irrigation, of transport facilities, of taxation, of improved breed of cattle, of scientific agriculture, of the supply of cheap and sufficient credit; of the consolidation of the subdivided and fragmented holdings, of the removal of rural indebtedness and illiteracy and the adequate supply of fodder and marketing facilities and finance. In the last analysis the problem resolves itself into (a) the improvement of agricultural practice leading to the increased yields and (b) the improvement in agricultural economics: securing to the cultivator the lion's share of his industry so that he may be induced to take a more lively interest in his work. This emphasis on the imperative necessity of improving agriculture does not mean that our country has been destined by nature to be an agricultural country and that she should concentrate all her energy and resources on the betterment of this industry and should not fritter them away on her industrial development. Even for agricultural improvements rapid industrialisation of the country is essential.

Causes of its Backwardness :

The reasons for the backwardness of Indian agriculture are not far to seek. They are to be found in the unfavourable environments under which the industry grew up and in the nature of its internal organisation and the external agencies on which it has to rely for support for its finance and for the

marketing of its output. As Mrs. Knowles says "Another cause of the relatively static condition of India arises out of the appalling uncertainty of life and property that prevailed up to the nineteenth century owing to the invasion, civil wars, and oppressions of native rulers on the one hand, and to the failure of the rains on the other. Pillage and plunder, combined with gross extravagance and luxury at the court for which the money was wrung from a poverty-stricken peasantry, were the characteristics of Indian Economic life in the 17th and 18th centuries." Hence, there was no incentive to effort. The most distinctive features of the internal organisation of rural society are: that the outlook of the peasant is fundamentally vegetarian, religious and non-economic; he is very painstaking, frugal, and simple, but very stolid, conservative, poor, ignorant, illiterate and a fatalist of the first water. The production of meat, and other animal substances, milk, butter, etc. for the market does not enter into the ordinary business of the agriculturist as in the West; that capitalist farming is an exception; the bulk of the land is occupied in small scattered holdings cultivated by the labour largely of the peasant and his family. Though there is much that can be said in the favour of the primitive self-sufficient peasant cultivation characterised by family cultivation, lack of capital including therein improved implements, good seed, better manures, cattle, and money at reasonable rate of interest, and a very low standard of living combined with less earning power, yet, the fact remains that it is inefficient and involves government assistance, education in school gardens, cooperation, marketing, seed selection and distribution, experimental and demonstration farms and a guarantee of price by the government.

One of the most potent causes of the backwardness of our agricultural industry is the small and uneconomic holding of the average farmer. The problem of the excessive subdivision and fragmentation of holdings is the burning problem today in India. It has rendered the holdings wholly uneconomic and their scatteredness has further aggravated the situation. To crown

all this, there is the growing and excessive pressure of population on the soil. The adverse effect of the pernicious laws of inheritance is nothing short of the prevention of any introduction of improved methods of production. The smallness of the holdings makes cultivation totally uneconomic and leaves no chance for the cultivator to produce sufficient to support himself and his family in reasonable comfort after paying all his expenses. Then to make matters worse, if any farmer cultivates more than one field, as is usually the case, they are separated from one another by long distances, with the result that they have, as Dr. Mann says all the evils of very small holdings in that they prevent the use of machinery and labour-saving devices, and, at the same time, they have all the evils of large holdings as they prevent the adoption of really intensive cultivation by hand labour which is the great advantage of a small holder.

Agriculture is even now in the self-sufficing stage; the supply of food for the household is still the primary aim of the peasant, although the importance of raising food and other raw materials for sale is steadily increasing. The climate of the greater part of the country renders artificial irrigation either necessary or desirable to ensure a successful harvest of the ordinary staples and the more expensive and remunerative crops. Production depends entirely on the periodicity of the rains, and hence is exposed to failure and uncertainty. "For several months in every year, India is on trial for her life, and she seldom escapes without a penalty." The extremely precarious nature of agriculture as a result of the monsoons renders the industry virtually "a gamble in rains." This has led to the frequent disorganisation resulting in the past not only in the terrible mortality of men and cattle in the famines, but also, in the destruction, more or less complete, of the meagre capital employed by the farmer. As a result of this and other causes capital has been scarce and dear leading to the modern phenomenon in which farming is carried on with a minimum of capital; there being practically no outlay on fencing, buildings or

machineries. The accumulation of capital is prevented, thus, by the recurrence of famine, the highly exorbitant rates of interest on unproductive loans incurred to finance marriages, births, funeral rites and obsequies and litigation.

Primitive and crude agricultural technique and poor equipment are also responsible for the unprogressiveness of Indian husbandry. Due to the want of an adequate knowledge and the lack of proper equipment, the soil, though generally alluvial and fertile, is seldom tilled as it ought to be. The implements and tools are very simple crude and old-fashioned. Cultivation at its best is distinctly good but in the greater part of the area cultivated there is much room for improvement. The cultivator as a rule possesses an intimate, though limited, knowledge of the essentials and technique of his business and fails not only through ignorance and illiteracy, but also through the lack of ways and means. Thus, poverty is his chief bane and the industry suffers through lack of organisation and proper equipment.

Then the inadequate quantity and poor quality of manure is another cause of backwardness of agriculture. The only source available and tapped to the greatest extent in the mofussil is the cow-dung but even this is not available; because the scarcity of fuel and poverty lead to the consumption of cow-dung for this purpose. Farm yard manure is practically effective and its value is thoroughly appreciated but the cultivator has much to learn about the storage of bulky manures and the conservation of urine and night soil. His religious susceptibilities stand in the way of their being utilized as also in the case of fish manure or bone-meal.

Besides these causes of backwardness, the internal arrangement of the rural society, according to Dr. Pillai, have led to the general neglect of agriculture, because some parties in it behave in a manner as if their interests collide with the true interests of the industry. These are the landlords, the cultivators and the farm labourers. It is a notorious fact that the Indian landlords

unlike their compeers in the progressive countries of the west have not cared very much, nor taken a lively interest, in the development and improvement of agriculture. The agricultural revival in England in the 18th century was due mostly to the enthusiasm of progressive landlords like Tull, Townshend, Bakewell and Arthur Young, who were "the most zealous students of agriculture and the boldest experimentalists in the new methods of culture." Many tenant witnesses before the Haver Sham Committee of 1911 bore testimony to the good treatment of their landlords. But what a contrast it is in our country! With few exceptions an average landlord has failed hitherto to play his part as the natural leader of the countryside by initiating scientific and improved methods of agriculture and has contented himself only with rent receipts. His paramount interest seems to have been the exaction and extraction of the maximum amount of rent from his tenant and its lavish expenditure on social entertainments and parties or on tours to big cities and towns or in foreign countries. He has been living on the fat of the land, taking dainty dishes and choicest food while the poor tenants have suffered want and misery. It must be said to their credit that they have very liberally contributed to the establishment of schools and colleges, hospitals and dispensaries and to other desirable social needs, but their munificence, as a rule, has been showered on towns and not on villages. The greater amenities of life in the towns attract them and they are guilty of practising "absentee landlordism." During the eighteenth and the early part of the nineteenth centuries the internal conditions of the country necessitated the relationship of feudal lords and vassals between the zamindars and the tenants. Invasions, internecine feuds and civil wars, pillage, plunder and loot that were rampant in this period, caused an appalling insecurity of life and property. Population did not increase, it rather declined. The resulting depopulation led to the bidding of landlords for tenants. Under such conditions, when land required tenants and landlords were eager to have

them, the relation between the landlord and the tenants was very cordial. The tenant was treated humanely and favourably. Moreover for the safety of his life and property the landlord was dependent on the tenants and, therefore, their silken bond was strengthened. With the establishment of Pax Britannica all this, however, changed. The settled conditions of the country led to security of life and property and to an increase in the population. The establishment of the courts of justice on the English models for the enforcement and the application of the English theories of land ownership under these circumstances enabled the landlord to enhance the rents and to rack-rent tenants. The rapid increase of population led, on the one hand, to occupation of vacant lands, and to the cultivation of inferior soils and subdivision of arable holdings, and, on the other, to an increase in the value of the land. The result was in the words of Knowles, "Landed property formerly the most insecure form of property, became the most secure, the increase of population filled up the waste land, there was a scramble for land and not for tenants." The village banker now lent large sums of money on land, for his security was now good, as the demand for land increased. The competition for land became so great by the 'eighties that if the cultivator were sold up some one else was always willing to buy, and as the English judicial system enforced contracts the indebted peasant had to go. Thus insecurity of tenure through pillage was replaced by insecurity of tenure through debt." Thus, the condition of the sub-proprietor was worsened, he was reduced to a tenant-at-will who could be easily evicted at the sweet will of the zamindar and the land would be offered to the highest bidder. With the destruction of the handicrafts and increase of the population the tenants began to compete for land and hence rack-renting ensued. Under these circumstances the cultivator had no incentive to introduce improvements. ✓

Thus it is that the rapid multiplication of population settled on the land increased competition for land in the absence

of any alternative occupation. The restraining influence of the need for defence being absent, the landlord, in a position of undisputed control, exacted from the tenantry all but the barest minimum necessary for keeping body and soul together, and to this the poverty-stricken and debt-weighted tenantry must submit in the absence of any other means to gain a livelihood. The ever-increasing rental of the landlord left to the tenant a share barely sufficient to supply the needs of himself and his family. Under the pressure of this competition the even and simple system of *Batai* had been twisted to favour the zamindar as is evident from a study of the fresh imposts of *Kharcha dhala, nazar, Khakiouna, Biaha, wazan-kashi* etc. The unnecessary delay involved in this system of *batai* and the losses suffered by the tenant led to its substitution, but even *Kankut* had been abused if the tenant disputed the land-lord's estimate entailing a material damage to the crop through the mischief of the land-lord's agents. The zamindar is thus able to extract all the profits from the land, while at the same time the state has relieved him of the necessity of performing these duties on which his claim was originally based. It is thus, that the cultivator does not exert himself to his utmost if he is assured of the bare minimum to which he is inured, when he knows to his cost that the improved yield will lead to increased rentals. The evils of the situation are not limited to this only. The tenants-at-will are subject to eviction if they do not find favour with the landlord. Under these circumstances to expect the cultivator to make improvements is a chimera. It is true that the state has taken steps to remedy these evils and has passed several tenancy laws from time to time, but these acts are mere palliatives. The true remedy lies in a real and unequivocal realisation of the principle of co-partnership and the understanding of its consequences. The theory of land-ownership in India being that of co-partnership, the interests of the state, the zamindar and the tenants are mutual and the largest return from the soil will be forthcoming when that

return is equitably shared by the parties concerned. Unless it will be so, the partner who gets less than his true share will not trouble to perform his part of the labour well, and the common return will therefore, be less. The state at present claims 50% of the assests from the zamindar and he, in turn, to keep all his paraphernalia in tact, exacts as much as he can from the tenant. It is no use killing the traditional goose that lays the golden eggs. The landlords, thus, like the moneylenders, are a parasitic class and a burden on the community.

It is no wonder then that the cultivator, as Dr. Pillai remarks, has made hitherto a poor response to the many stimulating influences which are at work around him. He goes on to say that the prolonged period of rising prices has offered him an exceptional opportunity for improving his farming methods and increasing his output, but he has chosen to utilize his greater earning power to enjoy longer spells of leisure. The Agricultural Departments have been trying to teach him the value of the new methods of cultivation, but, except in a few cases, their expert knowledge does not seem to have affected sensibly the current agricultural practice. And yet, peasant farming, as it is carried on in India, demands for its successful working not only great application and perseverance, but also the unwearied exercise of prudence, forethought, and watchfulness, and the utilization of scientific knowledge so far as it bears on the peasants' calling. *The value of the human factor, therefore, is not to be overlooked in taking stock of the agricultural situation*; for, as Prof. Carver remarks in his Principles of Rural Economics, "Communities and nations have remained poor in the midst of rich surroundings, or fallen into decay or poverty inspite of the fertility of their soil and the abundance of their natural resources, merely because the human factor was of poor quality, or was allowed to deteriorate, or run to waste." Now so far as this human element is concerned we have already seen that seasonal variations render agriculture a relatively precarious occupation and the undue

dependence of the cultivator on Nature has engendered in him a spirit of depression, fatalism and hopelessness unless he is assisted by external agencies. The mental inertia which often seems to accompany the pursuit of agriculture renders the progress of the art for a greater part empirical. Hence, it is difficult to convince the farmer of the practical utility of agricultural education so long as he looks upon the vagaries of the monsoons as the prime source of all his troubles while the unsuitable type of education imparted to-day has to a large extent increased its ineffectiveness.

Then there is the agricultural labourer; the growing mass of agrarian proletariat pregnant with vital and grave economic consequences. Agrestic serfdom is by no means extinct in the country and the inadequacy of agricultural wages are driving larger number to the factories, with the result that there is a paucity of agricultural labour in certain provinces though on the whole the excessive pressure of population on the soil is acute. *The agricultural labour is very inefficient, is supplied with very crude implements and tools and has a very low standard of living.*

Beside these three important communities constituting the rural society there are still two more classes, who, though not practising agriculture, have a profound influence on it. The cultivators have always been pursued by an irony of fate saddling on them the burden of maintaining out of their profits a large outsider class. During the Moghul period they had to maintain the courtiers and soldiers and these have given place now to the *moneylender, flourishing on the necessities of his neighbour*, and to the *middle man living on the ryots' intercepted profits*. The economic environment of the cultivator and the defective organisation of his calling render him powerless to withstand the inroads of these two classes on his earnings and thus, weaken his incentive to further productive effort.

Another fundamental defect of Indian agriculture is the absence of any organisation for the marketing of agricultural

produce. The lack of adequate means of communication and transport and of ample credit facilities; defective rural financial machinery, malpractices, and the presence of too many middle-men and the fact that the cultivator is a very small unit prevent him from getting a fair price for his produce. Then his illiteracy and ignorance due to the lack of organised marketing intelligence, chaotic weights and measures, inadequate facilities for storage, and the absence of properly regulated markets, admixtures and unauthorised deductions add to his difficulties.

The land revenue policy of the government has often been pointed out as a cause of the backwardness of our agriculture. Before concluding this analysis of the defects of rural organisation it is better to examine this statement. We have seen in an earlier section the evil effects of the Zamindari system of land tenure on the improvement of agriculture. In those parts of the country where the Government deals directly with the cultivator, as in Bombay and Madras it is the land-lord and can, if it so desires, raise the land-tax to the economic rent if not a rack-rent, especially when it requires no legislative sanction for its enhancement. Excepting Bengal, Behar and the eastern districts of the U. P. where there is the system of Permanent settlement, there obtains a periodical settlement the normal term over the greater part of the country being thirty years, though, in some special cases, a shorter period is fixed. It is not possible to discuss the merits and demerits of the Permanent Settlement in these brief outlines, but it is acknowledged on all hands now that it has been a great blunder to the greatest disadvantage of the government and the actual tiller of the soil. The late Mr. R. C. Dutt and his followers argue that the land-tax is excessive and trenches on the agricultural capital and the policy of revision at periodical settlements introduces an element of uncertainty and deters the cultivators from effecting any improvement by investing more capital in the development of the land. Sir Louis Mallet remarks in this connection, "on the one hand, we see a system which sweeps into the coffers of

the state 50% or more of the net produce of the soil, thus diverting a fund which, in countries where private property is absolute, would to a great extent find its way back again into the channels of agricultural improvement. But the amount of the produce thus diverted is not only large—it is also uncertain." The principles underlying this criticism have long ago been accepted by the government and now form the ground work of the Ryotwari System as framed by Munro. He emphasised the necessity of moderate assessment and the importance of securing to the cultivator the lion's share of his efforts in his Minute dated 31st December, 1824, in the following words, "They are never sure of enjoying this advantage as they are constantly liable to be deprived of it by injudicious over-assessment. While this state of insecurity exists, no body of substantial land holders can ever arise; nor can the country improve, or the revenue rest on any solid foundation. In order to make the land generally saleable, to encourage the ryots to improve it, and to regard it as permanent hereditary property, the assessment of land must be fixed, and more moderate in general than it is now and above all so clearly defined as not to be liable to increase from ignorance or caprice." In pursuance of the policy here adumbrated, the Government has successively reduced its claim of the share of net rental; in the settlements effected in the U. P. between 1820 and 1840, the standard was five-sixths which was reduced to $\frac{2}{3}$ in the latter year and to one-half in 1855. In December 1928 it was lowered to 40%. In the Punjab, the C. P. and Madras it is 50%. This is the maximum which may not be exceeded. As regards the plea for the extension of the terms of periodical settlements, it loses its weight in the face of the laws and regulations which protect to some extent the improvements on land in different parts of the country, but like Bombay and Madras, it may be possible to expressly exempt improvement. But the real need of the hour is "such a change in the practice on the part of the assessing authorities and such recognition of the weight of expert evidence as will ensure that

the peasant shall retain the extra income due to his efforts and outlay."

It has been often alleged that the striking poverty of the masses is in no small measure due to a high revenue system. In point of fact, the poverty is not the direct outcome of an excessive administration charge but is due to various reasons, as we have seen above. The pitch of assessment is really not very high. The burden of taxation per head of population according to the census of 1921 and assuming that the whole taxation is paid by inhabitants of British India, was Rs. 5-9-9; including land revenue; while exclusive of Land Revenue it was Rs. 4-2-9; therefore the average per capita charge on account of land revenue was Rs. 1-7 annas only.

So far we have discussed in some detail the defects of Indian husbandry as it stands today and find that its whole organism is suffering from certain acute maladies. It shall be our business now to suggest remedies for improvements both in the practice and economics of agriculture and for the amelioration of the hard lot of the helot of the soil. From a dispassionate perusal of the foregoing analysis of the defects of Indian agriculture it is perfectly clear that the problem of the improvement of Indian agriculture is a very complex problem indeed and that no cent and dried suggestions shall effectively cure it. We have to go deep to the very root of the problem and try to find out a true and correct diagnosis and not merely to offer suggestions which will be merely palliative and not curative. We have seen that this improvement means increased yields by the improvement of agricultural practice and increased profits to the cultivator by bettering his economic environment.

Such being the problem of the improvement of Indian agriculture, varied and numerous have been the suggestions made from time to time, but many of them have fallen short of practicability; for the simple reason that the suggestions have not taken into account the full significance of the circumstances

of the cultivator and his conditions of work. The urgent problem concerning agriculture here is the increasing of its produce. To achieve this end two things above all are necessary: more scientific methods and greater capital outlay. His Highness the Aga Khan says in his "India in transition" that with scientific agriculture the yield could be doubled in the next few years, and before the end of this generation it could be trebled, with a corresponding rise in the standard of living throughout the land. True it is that scientific agriculture will lead to a much greater output of products but it involves large tracts of land, deep ploughing, perfect irrigation, good manuring and proper rotation of crops; and thus necessitates a large amount of capital which is beyond the means of the ordinary indigent ryot. After pointing out that the urgent need of Indian agriculture is the increase in its produce, Prof. Knowles of the London University goes on to say, "But the small holdings, lack of capital, simple and antiquated tools, absence of good manures and improved seeds, and a lack of the knowledge of improved methods of cultivation all these combined with a profound distrust in new methods have stood in the way of progress. The only way out of it under the existing conditions is the supersession of the small scale, inefficient and extensive cultivation by an intensive, scientific and efficient cultivation." But deep ploughing involves a radical alteration in the cattle, more manuring which at the present is not available because the cultivator uses cow-dung as fuel, and finally, it means more capital and heavy and expensive machinery which the cultivator cannot afford to have. ✓

CHAPTER VI

Irrigation

One of the major needs of Indian agriculture is a cheap and ample water supply for successful cultivation of crops. Cultivation here is mainly effected by natural rainfall only but there are many parts in which the artificial watering of some portion at least of the crops is essential. In some parts rainfall of every season is insufficient to bring the crops to maturity, while in other parts it is liable to uneven distribution, or to such deficiency as to render the tract concerned famine-stricken in the absence of artificial irrigation. The chief characteristics of the monsoon are its unequal distribution over the country, its irregular distribution throughout the seasons, and its liability to failure or serious deficiency. The Indian Irrigation Commission 1901-03 recorded that between the area in which the annual rainfall is invariably sufficient, and that in which it is so scanty that no agriculture at all is possible without an irrigation system, there lies a tract of nearly a million square miles which, without the aid of irrigation, is exposed to the uncertainty of the seasons and to the scourge of famine. All areas getting an annual precipitation of 15 to 40 inches are in this uncertain or precarious belt and they comprise the Punjab, Sind, N. W. F., U. P. except the submontane tracts, large part of Bihar, Madras except the Ghats, Bombay except the coastal strips, Central Provinces and Rajputana. It is largely to remove the menace of extreme uncertainty of rainfall and its compression within two or three months that the remarkable systems of irrigation have been constructed. The Irrigation Commission chalked out a programme of irrigation extension for a twenty year period, estimated to cost 30 million sterling, and designed to bring into cultivation 6.5 million acres. Most of the main projects then designed have now been completed and there is a

very limited field now for the furtherance of remunerative irrigation works. There is, however, considerable scope for smaller works to mitigate the intensity of droughts.

There are various methods by which irrigation is accomplished in India. In addition to the remarkable canal system of northern India, a very large area is irrigated by the cultivators themselves, without any assistance from the Government by means of wells, tanks, and temporary obstructions or embankments to divert water from streams on to the fields. There are at least over 3 million wells in India from which water is lifted for irrigation, and, in Madras alone, there are over 35,000 petty irrigation tanks serving between $2\frac{1}{2}$ to 3 million acres. The capital invested in the wells alone is now probably not less than Rs. 100 crores.

Almost every known system of raising water, from the primitive plan of hand-lifting or baling in wicker-baskets or swing basket of plaited leather or bamboo strips to pumping by machinery, is simultaneously practised. The modern device of power pumping is gradually becoming more common through the efforts of the government engineers; but the means principally employed is cattle power harnessed to the Mot or Leather bag, which is passed over a pulley overhanging the well, then raised by two bullocks who walk down a ramp of a length approximating to the depth of the well. By this means from 30 to 40 gallons of water are raised at a time, and in its simplicity, and the ease of operation, construction, and repairing by the labour in the village, the Mot is unsurpassed in efficiency. There is also the Persian wheel in vogue, and in some parts and in others a lever (Dhenkuli or Picotab) which is a long pole weighted at one end and pivoted near that end with a small earthen bucket attached by rope to the other and worked by one or two labourers. It is practicable only when the water is 12 or 14 feet below the surface. Recently attempts have been made, particularly in Madras, to substitute mechanical power furnished by oil engines for the bullocks. It is possible and economical

only where the water supply is sufficiently large; especially where two or three wells can be linked.

Government have systematically aided well irrigation by advancing funds for the purpose at cheap rate (6½% takavi) and by exempting well watered lands from extra assessment due to improvement e. g. in Madras and Bombay. The recent figures give 30% of the irrigated area in India as being under wells. (Well water exerts at least three times as much duty as canal water and the cost of lifting is high for which reason it is used for expensive crops, but well irrigated lands produce at least 1/3 more than canal-fed lands.) Moreover it prevents waste by compelling the farmer to use it with care. The use of canal water lavishly causes waste, waterlogging, salt efflorescence and necessitates expensive drainage. Well irrigation is most prevalent in the U. P., Bihar, the Punjab, Madras and Bombay and for garden crops all over the country.

A new era in well irrigation has begun since the beginning of the present century. New wells have been bored by the engineers of the Agricultural department with machinery and their services are available to all. Upto 1922-23 there were 343 bores in the Punjab and 591 in the United Provinces. Thus the utility of the wells has been very greatly enhanced by enabling them to draw upon sub-artesian supplies through pipes and bores and small power pumps. This is an improved method of irrigation and there is plenty of scope for its development throughout the country. It has been suggested that in places where the small holdings of the cultivators prevent the adoption of such tube wells, cooperative societies for sinking and operating them should be started. The Royal Agricultural Commission was opposed to the U. P. government scheme of subsidizing tube wells but it recommended the provision of technical advice, grant of takavi loans and placing of boring equipment and skilled labour at the disposal of land-holders at a moderate charge. The total number of state tube wells in operation at the end of 1938-39 in U. P. was 1,471 which irrigated 583,517

acres and yielded a net profit of Rs. 1,41,993. Surveys for new sites for the construction of about 100 additional tube wells were started at the close of the year.

(A very interesting scheme of irrigation together with supply of electrical power for pumping water from tube wells and for small and rural industries is the Ganges Canal Electric Grid. Out of the ten falls available for electrification seven have been harnessed now. In addition to providing the modern amenities of life in 75 towns and current for minor industries, the grid provides energy for pumping water for irrigation from rivers and open and tube wells to one million acres of land in the districts in which there was no source of irrigation so far.) The proposal to start a similar grid system for the eastern districts of the province is under consideration. In the Punjab the fall on the upper Bari Doab Canal of Amritsar has been used for similar purpose for many years and the current from the recently completed Mandi hydro-electric system will be used for the same purpose.

Then come tanks which form one of the most important features of the countryside. They are of a varying size ranging from a capacity of holding up 4 to 7 billion cubic feet of water and spreading their waters through great chains of canal to the little village tank irrigating ten acres. They have been in existence for many generations and some of them are very old. For example two large tanks in the Chingleput district of Madras irrigating still 2 to 4 thousands acres are said to be over 1,100 years old. Tank irrigation is conspicuous by its absence in the Punjab and Sind but it is found in some form or other in all other provinces; and is most highly developed in Madras, where over 35,000 petty irrigation tanks irrigate between 2½ to 3 million acres. Besides it is also very much prevalent in Bombay, Mysore, and Hyderabad. In Bombay and Madras in the Ryotwari tracts all but the smallest tanks are controlled by the government, while in the Zamindari tracts only the large tanks are government works. According to the latest figure the area irrigated from tanks is about

8 million acres, but in many cases the supply is extremely precarious, and in times of famine they are useless, because the shortage of rainfall makes them dry up throughout the season. Some of them have silted up and others are in bad repair. Efforts should be made both by the state and the people to repair and improve them to provide irrigation facilities in such tracts as are not capable of having canals.

Turning now to canals we find that even before the British rule the Moghul Emperors were alive to the needs of agriculture and constructed canals which survive to this day; and long before the Agricultural Departments were organised on the present basis, the attention of the Government had been directed to the necessity for providing water as a measure of famine relief. The main contribution of the English has been the provision of large canal works and the 'Irrigation canals of Northern India which turn to productive use the water of the Indo-Gangetic system rank amongst the greatest and most beneficent triumphs of engineering in the whole world.'

These canals are divided into two main classes: those drawing their supplies from the perennial rivers of the Himalayas and the Madras; and those dependent upon artificial storage of water in reservoirs which are found mainly in the Deccan, the Central Provinces and in Bundelkhand and range in size from small earthen embankments to enormous dams. The expedient of storing water in the monsoon for utilisation during the dry weather subsequently has been practised here from times immemorial. The former class of canals may again be divided into the perennial and inundation canals; the former being provided with head works to enable water to be drawn from a river irrespective of its natural level; such canals are found in the Punjab and the U. P. Inundation canals have no such means of control, and water finds its way through them only when the natural level of the river reaches its height. Such canals are mainly found in Sind but they also exist in the Punjab.

Storage works are built by constructing a dam across a river to impound water of the monsoon.

Upto 1921 government works were classified into the Productive, Protective and Minor to indicate the sources from which capital for their construction was obtained. The productive works have been financed from loans and the protective ones had been financed from the current revenues until 1921. Since 1922 all works of public utility whether productive or not are financed from loans. Minor works are those which have been taken by the government from private persons. All works whether major or minor are now classified under productive and unproductive heads, the former being such as satisfy the condition that within ten years of their completion they produce sufficient revenue to cover their working expenses and the interest charges on their capital cost. All other works excepting non-capital are classified as unproductive, which are constructed primarily with a view to the protection of precarious tracts and to guard against the necessity for periodical expenditure in famine relief. They are financed from the current revenue, generally from the annual grant of famine relief and insurance, and are not directly remunerative. The third class consists of minor works for which no capital account is kept and irrigation in nearly a fifth of the whole area irrigated from government works is effected by them.

The total capital outlay direct and indirect on irrigation and navigation works including works under construction amounted at the end of the year 1936-37 to over 154 crores of rupees; the working expenses to about Rs. 5 crores and the gross revenue to about Rs. 14½ crores, with a net return of 6.09%. Government works have yielded an average profit of 7 to 8 per cent but the percentage differs from province to province. In 1936-37 Punjab as usual got the largest return in productive works viz 14.5%, N. W. F. 11.3% Bombay 9.4% Madras 7.6% Bihar 7.1% and U. P. 5.8%. This is a satisfactory return because the unproductive works

yield less than 1% and the capital outlay includes also expenditure on works under construction.

There has during the last sixty years been a steady growth in the area irrigated from state works. From $10\frac{1}{2}$ million acres in 1878-79 the area annually irrigated rose to 28.1 million acres in 1919-20, and in 1922-23 to 28.33 million acres which was the record year. In 1926-27 it was 23.2 million acres and rose to 31.64 million acres in 1929-30. In 1936-37 the total area under irrigation from government works of all classes amounted to some $32\frac{1}{2}$ million acres which was equivalent to $\frac{1}{8}$ of the total cultivated area in British India. The main increase has been in the class of productive works, which irrigated $4\frac{1}{2}$ million acres in 1878-79. It rose to 19.15 million acres in 1927-28 and to 23.50 million acres in 1929-30. In 1935-36 it was 22.73 million acres. In the same year the total area irrigated from protective works was 3.89 million acres. Of the total cropped area 13.38% was irrigated from state works and the total value of the crops raised was over 114 crores of rupees. The area irrigated was the largest in the Punjab (12 million acres) followed by Madras with $7\frac{1}{2}$ m., Sind $4\frac{1}{2}$ m., U P. 4 m.; but in the percentage of area irrigated to the total area sown Sind led with 86 followed by the Punjab with 36.5, Madras with 20 and N.W.F. with 17. There were 275 irrigation schemes in operation in British India of which 70 were of a major description; nearly a third were productive and the rest unproductive. The total length of the main and branch lines and distributaries of the canals in operation now amounts to over 75,000 miles which would thrice "span the globe". An ultimate area of 50 million acres is expected to be irrigated with the completion of all the schemes.

The charges for water are levied in different ways in the various provinces. Generally speaking water is paid for separately, a rate being charged per acre according to the crop grown. The general principle of canal irrigation is "No crops, no charge." Lower rates are charged where irrigation is by lift i. e. where the farmer has to lift the water to his field from the channel.

In Sind the ordinary land revenue assessment includes also the charge for water, 9/10 of which is regarded as due to the canals. In Madras and Bombay land revenue is assessed according as the land is irrigated or not, and the assessment upon irrigated land includes also the charge of water. The rates charged also vary according to the crop grown and are different in each province and often different upon various canals in the same province. In the Punjab they vary from Rs. 7-8-0 to Rs. 12 per acre for sugarcane, from Rs. 4 to Rs. 7-8-0 per acre for rice, from Rs. 3-4-0 to Rs. 5-4 0 per acre for wheat, from Rs. 3 to Rs. 4-4-0 for cotton and from Rs. 2 to Rs. 3-4-0 for millets and pulses. Charge is made for additional waterings. In parts of Bengal and Central Provinces a long lease system is adopted under which the farmer pays a small rate for a term of years whether he takes water or not.

Thus we see that the engineering operations of the Agricultural Departments are very important; and the connection of existing irrigation wells with sub-artesian supplies by means of pipes and bores, offers a most fruitful line of progress. The demand for well-boring engineers is steadily on the increase, while, small pumping stations are becoming increasingly popular in various parts of the country. Besides, the introduction of such dry-farming methods as may be found successful by experiments, and are likely to increase the area under cultivation and thus, add to the agricultural wealth of the country, should be encouraged. Investigations concerning the possibility of dry-farming should be undertaken and research work organised. There seems to be ample scope for its introduction.

Merits and Demerits:—There are a number of advantages arising out of irrigation. Firstly, it makes possible the cultivation of land in semi-arid regions and tracts in which the rainfall is irregular and deficient. Thus it protects precarious tracts from the scourges of droughts and famines, makes agriculture in them stable and thus adds to their security and well-being. Secondly, it increases the yield of the crops by increasing the fertility of

the land and therefore the value of the land as a security rises and rents increase. Thirdly, the railways also profit very much because their freight earnings multiply with the mobilisation of larger quantities of raw produce and materials. Fourthly, They increase the government revenue by extending the area cultivated and through the charges for water. There is also a very handsome return on the capital outlay. Thus, as Mrs. Knowles writes, "The irrigation works have made for security of life, they have increased the yields and the value of the land and the revenue derived from it. They lessened the cost of famine relief, and have helped to civilize whole regions. In addition, they now yield a handsome profit to the Government of 7 to 8%. As the Indian Government borrowed at 3 to 3½%, the net gain, apart, from all other advantages, is 3 to 5%. This is however, an average profit. Some canals pay far more, the Chenab Canal, for instance, has brought in an average profit of 41% in the seven years prior to 1921." Irrigation has helped to colonise large areas which were formerly semi-arid regions extremely desolate and treeless in the Punjab. The Punjab Canal Colonies are the living emblem of what irrigation can do in a tropical and poor country like ours.

Canal irrigation, however, suffers from a very serious defect against which it is very necessary to guard effectively. An abundant supply of water from canals for irrigation does not only lead to a great waste of water but what is more serious it causes waterlogging and salt effervescence. This causes the soil to deteriorate by bringing out alkali, lona, or *Reh* to the surface of the soil. In the Punjab it is reported that 125,000 acres were thrown out of cultivation by the rise of subsoil water and a still larger area was rendered unsuitable for growing of crops by the appearance of salts or kallar. Similarly in the Nira valley of Bombay alkali lands have arisen from canal irrigation and the evil is increasing every where. The Agricultural Commission held that this wastage was not entirely due to the want of incentive on the part of the cultivator to economise water supplied by

the government but to the uncertainty of water supply; and, to ensure economy, they recommended that more investigation and experiment on the lines suggested by the Irrigation Commission should be undertaken before it was decided to sell water by volume. Moreover canal irrigated areas have shown susceptibilities to encourage malaria with its very harmful and pernicious effects on the health of the peasants and the village folk. To safeguard against this danger the Agricultural Commission recommended that careful drainage surveys should be made in future in all irrigation projects and drainage maps should be prepared.

Historical resume: Irrigation from wells and tanks has been practised from time immemorial in our country. Dams and embankments to impound water have also been made. Even canals have been constructed by the past rulers e. g. the Western Jumna Canal dates from the 14th century and the Eastern Jumna Canal was constructed by the Moghuls. The Cauvery delta system in Madras dates from the second century A. D. All these were inundation canals and were built by forced labour of coolies who were fed during the progress of the works and the fall of the Empire during the eighteenth century prevented the maintenance and repair of the canals by forced labour. Then as Mrs. Vera Anstey has put it, "the lack of capital and engineering skill, insecurity of tenure and consequent unwillingness to sink capital in fixed improvements, and ever recurring invasions and internal political dissensions, seriously checked the extension of irrigation." During the 18th century, therefore, the Jumna canals fell into decay. They were destroyed and in many places covered with jungle. The Grand Anicut on the Cauvery having withstood floods for 1600 years had begun to silt up.

The *East India Company* first of all devoted its attention to the revival and improvement of these old works. The *Western Jumna Canal* was the first to be repaired in 1821 and then the *Eastern* in 1830. Both the canals, however, caused water-logging, salt efflorescence, and malaria and it was

not till the middle of the seventies that they were entitled to rank as modern works. The two canals now comprise 2900 miles of main lines and branches and irrigate between them 12 to 13 lakh acres. Then the *Cauvery system* was remodelled between 1836-45 and now irrigates over a million acres from 3,500 miles of main and branch lines. The success achieved in the reconstruction of these old canals encouraged the engineers to undertake new works in several provinces mainly with a view to mitigate the evils of the famines. Thus, in 1842 the construction of the great Ganges Canal began but on account of wars it was not opened till 1854. Now it is one of the greatest and most successful irrigation works in the world. It consists of 3,898 miles of main lines and distributaries and irrigates $1\frac{1}{2}$ m. acres, and has turned one of the famine-ridden tracts into one of the richest in India. The main lines have been used for navigation also before the railways for the transport of heavy goods. Another great work begun by the Company was the *Upper Bari Doab Canal* which has been built to replace the old *Hasli Canal* which carried water to Lahore and Amritsar from the *Ravi*. It was opened in 1859. It has converted a wild jungle into one of the most profitably cultivated parts of the Punjab. It comprises 1,345 miles and irrigates about $1\frac{1}{2}$ million acres annually. Then the *Godavari Canal* to irrigate the deltaic areas was sanctioned in 1845. Between 1832 and 1841 there were four famines and three years of scarcity in this area and it was the desire to combat this menace that the canal was constructed. Now the delta abounds in paddy fields and fruit trees. This canal irrigates a million acres annually, and provides an excellent means of transport even to this day. Then the canals to irrigate the *Kistna delta* were completed in 1855. They comprise 2,535 miles of main and branch lines which irrigate over 700,000 acres annually. In addition to these the Company improved many inundation works in the Punjab and Sind. The most important of these were the *Begari canal* which before its partial replacement by one of the new Sukkar Barrage

Canals irrigated about 300,000 acres; and the *Fuleli canal* which is the largest inundation work in Sind carrying 10,000 cubic feet a second and irrigating 450,000 acres annually.

Thus, before the era of the railways the Company took in hand important works. This was due not only to the desire to fight the famines but also to the fact that the period under review also witnessed an era of canals in England between 1780 and 1830. However, the English canals were meant for navigation while the Indian canals were designed primarily for cultivation. They have failed to develop as means of transport except in the deltaic regions of the Deccan.

The success of these canals encouraged *private companies* to undertake the building of canals though they proved failures. The earlier schemes, we have described above, were constructed out of revenue and imposed a heavy strain on the Company's finances. In 1857, therefore, the Directors invited proposals to build new works in Madras by private enterprise with guarantees. (A big irrigation and navigation scheme was suggested which envisaged a system of canals to link up the Madras canals with the Bombay Deccan on the west and with a system of Orissa canals in the east; and another navigation canal from the Ganges north of Calcutta to connect that city with Cawnpore and then up the Ganges to Hardwar. Two companies were floated to take up the scheme. The East India Irrigation and Canal Company was set up in 1858 to build irrigation and navigation canals in Orissa. It began work in 1863 but by 1866 it had spent up its capital and in 1868 the Government took over the work paying it £ 990,000. The canals eventually completed provide water for more than 200,000 acres but they have not yet been a paying asset. The government also took over the *Son canal in Behar* originally planned by the Company as also the *Midnapur canals* begun again by the Company. The Son canal now irrigates 570,000 acres annually. The Madras Irrigation Company was formed in 1863 with a capital of £ 1,000,000 to carry out the first scheme. It also failed

miserably and in 1882 the Government bought it out for £1,185,500. The *Kurnool Cuddapah canal*, started by the Company now irrigates only 80,000 acres annually. The chief cause of the failures of these schemes was the desire of the companies to secure immediate profits and lack of knowledge and experience of local conditions.)

New Policy:—The failure of this private enterprise led to a change in policy of financing irrigation schemes. The Governor-General requested the Home Government to permit the construction of remunerative works out of loans and this principle was accepted by the Secretary of State after the Orissa famine of 1866. This policy of raising funds in the open market led to the construction of some of the greatest works in the United Provinces and the Punjab, Bombay and N. W. F.). These are the *Sirhind Canal* with a total mileage of 3,733 miles and irrigating 1,800,000 acres annually in the Punjab and the Native states therein; the *Lower Ganges canal* with 3,827 miles of channels and irrigating about one million acres annually; the *Agra canal* with a mileage of 1,002 miles and irrigating 280,000 acres annually; the *Lower Swat canal* which irrigates 160,000 acres; and the *Mutha canal in Bombay* where the reservoir has a storage capacity of 3,955 million cubic feet, and is over 6 sq. miles in extent. But the most important inundation canal built under the new financial policy was the *Desert canal* which irrigates over 200,000 acres in Baluchistan and Sind.

In the meantime the government had begun to realise their responsibility for famine relief and therefore for the construction of protective irrigation works in the areas most liable to famine. Hence, after the report of the Famine Commission of 1880 to the close of the last century a remarkable development of canals took place. In addition to the famine protective works in the Deccan, U. P., and Sind, *colonisation canals* were constructed in the Punjab. On account of their heavy initial expenditure and the irregular demand for water from the farmers together with the failure of the rainfall the protective works did not pay

their way and the Government then concentrated on the remunerative works of colonisation in the Punjab. The canals between the Jhelum and the Sutlej were built to colonise the vast areas of arid uncultivated waste in which the rainfall was between 5 and 15 inches a year and which were inhabited by a few graziers and herders. The works began in 1882 with the small *Sohag* and *Sidhnai* canals which were so successful as to yield 40%. This encouraged the government which undertook the construction of the *Lower Chenab Canal* which is one of the largest and probably the most profitable canal in the country. Knowles thinks it to be the greatest irrigation work in the world probably. It commands an area of 3 million acres, and the *Lower Jhelum* about a million acres. The vast stretch of the unclaimed waste was taken up by the government as Crown waste with a view to relieve the pressure of population in the thickly peopled areas elsewhere and to open these waste tracts which had good soil but needed water to cultivate. The land was surveyed and divided into rectangles, canals were constructed and village boundaries made. The colonisation began in the *Chenab colony* in 1892, in the *Jhelum colony* in 1901, and in the *Jamrao colony* in 1898 in Sind.

As regards the protective works, since 1878 the government began to set apart a sum of $1\frac{1}{2}$ crores of rupees each year for the Famine Relief and Insurance Fund out of which a sum of Rs. 76 lakhs was to be utilised for the building of protective railways and irrigation works. After 1900 the whole sum was devoted to the construction of irrigation works only and a further sum of Rs. 25 lakhs was sanctioned for the same purpose. But the full quota was never utilised. The first protective work undertaken in this scheme was the *Betwa canal* which, with two storage reservoirs storing 6,220 million cubic feet of water, irrigates about 200,000 acres. Many important storage schemes were begun in the Bombay Deccan the most important of which are the *Nira* and *Periyar canal* systems. Two important works in Sind were the *Jamrao* and *Western Nara canals*.

The famines of 1899-1900-1901 and the success of the irrigation works of both types led to the appointment of the Famine Commission of 1901 which made very important recommendations for the development of irrigation facilities not only for the purpose of protection against famine but also for increasing the productive capacity of the land, and thereby relieving the cost of famine relief. (The Commission held that the railways had played their part as an agency for famine insurance, and now it was time to develop the food supply by constructing productive canals in the Punjab, Sind and Madras. For the protection of the famine areas they recommended the construction of protective works, and for the Bombay Deccan especially, they recommended the building of storage works in the Ghats to take out canals. Together with the Tungbhadra and Kistna projects these schemes were estimated to cost 44 crores of rupees, and to irrigate $6\frac{1}{2}$ million acres. The upshot of these recommendations was the undertaking of a number of new works between 1905 and the Great War.) The preponderance of railways over irrigation which evoked the scathing criticism of historians like R. C. Dutt was given up.

The most important of these works was the Triple canal project of the Punjab which, linking the Jhelum, the Chenab and the Ravi, led to the construction of the Upper Jhelum, the Upper Chenab and the Lower Bari Doab canals. This project was completed between 1912 and 1915 and commands 3,997,000 acres or 6,250 sq. miles. Nearly two million acres are now irrigated annually. The Lower Jhelum canal was finished in 1907 which commands $1\frac{1}{2}$ million acres and over 800,000 are now irrigated every year. In addition to these a number of protective storage works were carried out in Central Provinces, Bombay Deccan and Bundelkhand. The largest of these are the Mahanadi, Wainganga, Tendula and Ramtek canals, each of the first two of which is capable of irrigating nearly 100,000 acres every year. In United Provinces the chief works since 1903 have been the Ken, Dhasan, Ghaghar, and Gurai canals.

Besides these, minor tanks, as famine protection works, were built in 1907-08. In Bombay the *Bhandara Dam* and the *Bhatgar Dam* supply water to the Nira Right Bank canals and the Pravara River Works which between them irrigate 189,000 acres in the dry seasons. The *Upper Swat canal* was opened in Sind in 1914 and irrigates 200,000 acres annually, and the *Tribeni canal* in Behar constructed in this period irrigates 100,000 acres.

The Great War then interfered with the development of other projects. Since the introduction of the Reforms of 1919 irrigation has become a provincial subject and only those projects which are estimated to cost more than Rs. 50 lakhs now come before the central government for submission to the Secretary of State. The provinces have been granted greater financial powers and the financing has also become more liberal. Loans can be taken even for protective works now, and money is available from the Famine Insurance Grant for expenditure on irrigation when it is not necessary for actual famine relief. The post-war period therefore witnessed the launching of three ambitious schemes which have been recently completed. These were the *Sukkur Barrage* scheme in Sind, the *Sutlej Valley* scheme in the Punjab and the Indian states of Bahawalpur and Bikaner, and the *Sarda-Kichr* project in Oudh. The *Sukkur Barrage* comprising seven canals on either side of the river Indus and with a total length of 6,564 miles commands a gross area of $7\frac{1}{2}$ million acres of which 5 m. are irrigated annually. Its total cost is over 23 crores of rupees. The *Sutlej Valley Works* comprise in all ten canals taking off above four weirs. Their combined length is 9,600 miles. They were estimated to irrigate over 5 million acres and cost over 21 crores of rupees. The results have, however, been disappointing on account of the unsuitability of a large area for cultivation in the Bahawalpur state and the less than anticipated supply of water from the rivers. The *Sarda Canal* with 4,177 miles of main and branch channels is the longest single canal in the world. It was

designed to irrigate $13\frac{1}{2}$ million acres and irrigates about a million acres annually. All these three canal systems came into operation in the period of the depression and they will, therefore, take time to be classed as productive. Another very important work recently completed is the Cauvery Mettur Project in Madras the cost of which was estimated at 7.37 crores and which would command a new area of over 3 million acres. It will also be used for the generation of electric power which will enhance the potentialities of Mettur as an industrial centre. Other canals are the Nira Right Bank canal designed to irrigate 132,000 acres in Sholapur districts and the Damodar canal in Bengal which will irrigate 200,000 acres. The Nira Left Bank canal is being remodelled. In the Indian states also notably in Hyderabad, Mysore, Gwalior, and Bikaner many important schemes have been undertaken and some completed recently. Besides these, several projects are under contemplation in practically all provinces, and the advent of the popular ministries has led to an increased activity. The most important of these projects are the Haveli and the Thal canals and the Bakra Dam project in the Punjab, the Lower Sarda canal in Oudh, and the construction of a great dam on the Kistna. Of these the Haveli project since completed at a cost of Rs. $4\frac{1}{2}$ crores will provide irrigation for over a million acres in all. Many storage works are under contemplation in the Central Provinces, in Bombay Deccan and in Bundelkhand. The Kattalai scheme in Madras costing Rs. 37 lakhs has also been completed and a large project for impounding the waters of the Tungbhadra is under negotiation between Madras, Hyderabad, and Mysore Governments. To determine the possibilities of extension of irrigation and the improvement of drainage and sanitary conditions, a contour survey of Bengal has been undertaken. The Darakeshwar Reservoir scheme is intended to irrigate 180,000 acres. Dredging has been undertaken in the Lower Kumar river, Circular Kristopur canals and in the Madhumati River. The Mat and Hathras branches of the Ganges canal have been remodelled to

provide a greater annual supply of water. The Nindoh Reservoir scheme for the extension of the Garai canal irrigation system is being reviewed for developing electric power to provide urban electricity and irrigation from canals fed by water pumped from rivers by electric power schemes have been sanctioned in Oudh. Of these the Gogra pumping scheme with a powerhouse at Sohwal Railway Station to work the pumps and electrify the Fyzabad town has been completed. The canal is designed to irrigate over 43,000 acres annually. Finally mention may be made of the important Quetta storm water drainage and embankment project designed to protect the town from the havoc of flood waters.

This history of the irrigation works brings out clearly that all the big rivers have been fully tapped and there is now not much scope for the development of major works; but there is still a great scope for the development of storage works to hold up the water which at present goes away to the sea unutilised and for the construction of tube wells. "When allowance is made for the more promising projects now being considered and for the natural expansion of existing schemes, an ultimate area of 50 million acres is by no means improbable." (The Royal Agricultural Commission recommended the appointment of officers to examine the natural resources of the various provinces for the protection of the land from famine and the starting of cooperative societies for the construction, preservation and improvement of minor irrigation works. They also recommended the establishment of a closer relation between the Irrigation and the Agricultural Departments, the formation of local advisory committees and the establishment of a central Bureau of information at Delhi. In pursuance of this recommendation the Government established the Central Bureau of Irrigation as an essential adjunct of the Central Board of Revenue in May 1931 for the free exchange of information and experience in irrigation in the various provinces, for the coordination of research in irrigation and to disseminate the results achieved. It also arranges for

conferences of provincial engineers and establishes contact with foreign bureaux. All the provincial governments as well as the central, contribute towards the maintenance of a library attached to it.)

CHAPTER VIII

Subdivision and Fragmentation

"Land in India is subjected to a continuous series of economic earthquakes owing to subdivisions." Knowles.

One of the fundamental causes of the backwardness of our agricultural industry and of the chronic poverty and hopeless indebtedness of the cultivators is the subdivision and fragmentation of their holdings; and no scheme of agricultural improvements or of rural uplift and reconstruction can be successful without a satisfactory solution of this evil which blocks the path to progress. Subdivision (the partition or distribution of the land of a common ancestor amongst his successors in interest, usually in accordance with the laws of inheritance, but sometimes affected by voluntary transfers by sale, gift or otherwise) and fragmentation (the scatteredness of an individual holding throughout the village area in plots separated by plots of land in the possession of others) make the farms of the wrong size and wrong shape and render them such fluctuating units that there is no incentive to effect permanent improvements. The holdings become uneconomic in that they fail to provide a living to the cultivators and on account of their narrow strips are not capable of being efficiently cultivated. The cultivators therefore have to accept a low standard of living due to their small holdings although there are other subsidiary causes for it.

The evils of this subdivision and fragmentation are being experienced in all the provinces and states in India, but it is most acute in the thickly peopled parts of the Gangetic plains. The problem, however, is not peculiar to India. It has appeared in the European countries and also in China and Japan. We have seen elsewhere how England solved the problem of the strip system and scattered tenancies at the beginning of the 19th

century by the enclosure and consolidation of fields with a view to develop scientific agriculture and to secure better yields. She had to resort to legislation to prevent a recalcitrant minority from thwarting the efforts at consolidation of plots into contiguous and compact holdings. The same problem of enclosure of open and fragmented holdings is facing our country today as it appeared in England towards the end of the eighteenth century. Denmark experienced the same difficulty in the second and third quarter of the 18th century as also did Sweden; and the problem appeared also in Norway, Germany, Holland, Austria, France, Switzerland and Russia. France has solved the problem partly by limiting the size of an average family through birth-control which reduced the number of participants in subdivision at the death of the proprietor, partly by the purchase of small parcels to round off their own holdings by the peasants who are very hard-working and frugal, and partly by legislation. In all these countries as also in Japan the failure of private initiative in restripping of the plots into compact holdings has necessitated the passing of remedial legislation. A study of the movement for consolidation of holdings in these countries brings out many interesting points of similarity in their efforts and experiences. Firstly, all of them found that the improvement of agriculture was hampered by fractionalisation of the holdings and therefore consolidation formed an important plank in any scheme of agricultural development. Secondly, all of them had to take administrative and legislative action for restripping because private agreements at consolidation without the force of law failed. Thirdly, to carry on the work of improvement consistently and steadily, specially trained and qualified staff had to be engaged and a large expenditure had to be incurred. Fourthly, the governments had to give liberal grants to meet the cost of restripping. Fifthly, an adequate financial help had also to be given to enable the cultivators to improve their methods and technique. Sixthly, the legislative measures in all of them comprised the following things :—(a) compulsory expropriation of

existing holders (b) compulsory reconstitution of holdings at the instance of a certain fraction of landholders or in some cases without it; (c) subsequent indivisibility of reconstituted holdings; (d) exemption of the holding from *soizuro* for debts; and (e) prevention of the reconstituted holding from being combined with other holdings.

This fractionalisation of the holdings is, however, only a recent phenomenon. Before the British rule the tribal or communal organisation of the village had led to the distribution of fields among the cultivating joint families to secure the equality of opportunities to all and to minimise the risks of failure of crops to individual families. This desire to ensure equality of allotment in the various soil blocks of diverse fertility had led like the manorial system in England to the assignment of strips set at right angles to one another. This had led to scattered strips of land but the village community had also devised means to ensure compact holdings. The unit of cultivation being the joint family, partition of land was very uncommon and moreover the pressure of population was less heavy. With the establishment of the British rule and the application of the English notions of justice and private property based on the principle of individualism the economic solidarity of the joint family has been very adversely affected and its breakup has led to the partition of the joint ownership or *tenancy* of land among the male heirs. The increase of population and the pressure of it on the land has been further aggravated by the downfall of the village and small industries and therefore the morsellement of the holdings has become very acute. Dr. Mann for example has pointed out how in a village in the Poona district the average size of holdings has fallen during the last 60 or 70 years from 9 to 10 acres to less than 5 acres. In 1771 the average size of the holdings was 40 acres, in 1818 it was reduced to 17.5 acres, between 1820-40 it remained 14 acres and in 1915 it was reduced to 7 acres. Similarly Dr. Mukerjee says that even in a district of *bhaichara* communes like the Meerut

district the number of proprietors has increased by 50% during the last three decades of the nineteenth century. The same is true of the other parts of the country. The magnitude of the evil of fragmentation can be gauged from the fact that the average cultivated area per cultivator is 12 acres in Bombay, 11.5 acres in N. W. F. province, 9.2 acres in the Punjab, 8.5 acres in the Central provinces and Berar, 5.65 acres in Burma, 3 acres in Bengal, Assam Behar and Orissa, and only 2.5 acres in the United Provinces. It appears from a perusal of the statistics of holdings in the different provinces that the holdings are the smallest in the thickly populated parts of the riverine tracts with heavier rainfall and alluvial soils. As Dr. Mukerjee puts it, in such densely populated areas as the Ganges-Gogra Doab, the eastern districts of the United Provinces, South Bihar, the Padma, Jumna, Cauvery and Godavari Deltas, fractionalisation of holdings has gone to grotesque lengths. Many holdings in these parts and especially in the eastern districts of the United Provinces fall below one acre. In a village in Gorakhpur district for example the average holding was found to be only 0.29 acres. An investigation into the holdings of three villages in Ballia districts by Mr. U. N. Tiwari revealed that 19.7% of the plots were under '1 acre and 55.9% were between .1 and .4 acres. Similarly an enquiry in a few villages of three districts of Saharanpur, Muzaffarnagar and Allahabad by Mr. B. P. Jain showed that the average size of plots for the three districts were .91, 2.2, and .76 acres respectively. The evils of this smallness of the plots are further aggravated by the fact that all these plots are scattered and separated by long distances from one another.

*Causes of subdivision and fragmentation :—*The primary cause of the subdivision and fragmentation of holdings is the law of inheritance and succession among the Hindus and the Mohammedans. As Dr. Mukerjee remarks "The evil of excessive fragmentation has been the result of the agnatic principles of succession among male heirs and the desire of equality, each

co-sharer on a partition insisting on a separate share in each quality of land in the village". As we have pointed out above the evil effects of these pernicious laws of succession have been enhanced in modern times by the spirit of individualism which is abroad and the application of the English notions of private property and individual rights in land by the English judges in the courts of justice in British India. The way in which the partitions of proprietary holdings are carried out by the subordinate officers of the Revenue Department is especially responsible for the fragmentation of holdings. Each heir invariably demands his share of each item of the property; his share in every kind of soil, of every well, tank, house, grass and pasture land, of roads and paths, and even of individual trees. This causes an increase in the number of the plots which become tiny parcels fragmented and scattered. Mr. Tiwary has shown how the proprietary holding of one man consisting of 24 plots making 8 acres was divided into 48 plots on the death of the father between his two sons. In case of the Mohammedan families even the females have a right to share in the property and this fact makes subdivision still larger. Mr. B. P. Jain has shown how the proprietary holdings of a Muslim Zamindar in a village in Saharanpur district consisting of 72 bighas and making 24 plots was subdivided on his death among his wife, two sons, one daughter, and one daughter-in-law with the result that 108 plots were made. Such minute subdivision of necessity causes scatteredness of the fields of the cultivating unit and the increasing evil of fragmentation makes the problem of scatteredness and smallness of plots all the more acute.

Another cause of increasing scatteredness of plots is the desire of the cultivator to have a share in almost every soil block of different fertility and rainfall. The extreme dependence of agriculture on a precarious rainfall also determines the distribution of holdings. According to Dr. Mukerjee where the rainfall is abundant and certain, the size of the average holding is much smaller than in areas where rainfall

is inadequate and precarious. Similarly, along the fertile silt covered valleys of the rivers, the proportion of small-holdings is much greater than in the less fertile tracts. Where agriculture depends upon well-water and where there is scarcity of rain, small holdings preponderate because well cultivation based on bullock power is usually on a small scale. The vicissitudes of political struggles and invasions have led to grants of land and the creation of large estates.

Then the agricultural practice has also affected the present distribution of holdings. The rotation of crops which is so much prevalent requires several kinds of land suiting various climatic conditions. Similarly in northern India there is the practice of leaving large areas of land as fallows so that the fields may be allowed to recuperate health. This also means that a holding should consist of many plots to allow fallowing in rotation otherwise there is the danger of fast depletion of the fertility of the soil by continuous cultivation and cropping. Thus the practice of rotation and fallowing are also responsible for the existing distribution of the fields. Further the fact that the fields here are open and unenclosed makes their subdivision very facile and easy. Then the nature of the crops is also responsible for the existence of small plots in certain areas. In the rice growing tracts, for instance, in order that drainage and transplanting of paddy can be carried on conveniently the fields must be small.

The social status, the system of land tenures, and the standard of living and of equipment of agricultural capital also determine the size of the holdings. Investigations in some villages of the Meerut district by Mr. Baljit Singh have revealed that the holdings of the Jats, the greater proportion of whom enjoy permanent rights in the land, either proprietary or occupancy, are most substantial. They have much better equipment of capital in live-stock and implements etc., enjoy a higher standard of living and have a higher standard of cultivation than the Chamaras of the same areas whose equipment on account of their poverty and low

standard of living is very meagre, and whose rights in the land are the least protected. They usually occupy the less attractive lands on the outskirts of the village, have smaller holdings, pay higher rents and interest and are inferior in their standard of cultivation. Our own experience of the eastern districts of the province supports this view. Moreover we find that the freeholders like the artisans of the village, the priest, the barbers the sweepers and the chamars have usually very small holdings very often with practically no equipment. They cultivate their fields by borrowing the plough and bullocks of others and take to the cultivation only as an additional source of their income. Thus they have cultivation of land only as a second string to their bow; their holdings are very small, they are very poor and indebted, and have a low standard of living.

The increase of population is also given as one of the causes of subdivision and fragmentation of holdings. So long as there was a sufficiency of unoccupied lands the increase in population was absorbed without causing any subdivision; but with the occupation of all the available land the increased number of heirs led to an increased pressure on the land. This by itself, however, would not have caused subdivision, unless the joint family was broken up by other causes. Therefore the increased population can be held as a cause of subdivision only is so far as it encouraged through malice and jealousy the break-up of the joint family. So long as the joint family was intact and the standard of farming high the holdings were larger. The lapse of the communal institutions and the lowering of the standard of cultivation have caused smaller holdings. Thus one of the main causes of the subdivision and fragmentation is the break-up of the joint family. This assertion is proved by the fact that wherever the joint family has remained intact the holdings either proprietary or cultivating are large.

Finally, the decline of the handicrafts in modern times and the absence of any expansion of modern industry corresponding to the increase in population and pressure on the soil is also

responsible for subdivision and fragmentation. In so far as the decline of the handicrafts drove the artisans to be tenants their demand for land, in the absence of any alternative occupations, must have caused greater subdivision of cultivating holdings as distinguished from proprietary holdings. If the development of industry has been commensurate with the increase of the population the surplus population would have been absorbed in it, and the increased pressure of the population on the land would have been averted. But this was not to be; and the development of separatist tendencies due to the importation of western ideas and notions of individual rights and private property led to the dismemberment of the joint family which, through the resort to the laws of succession, caused subdivision and fragmentation of holdings.

Merits and Demerits:—It is often claimed that subdivision and fragmentation have a number of merits. Subdivision brings about a wider distribution of property in the land and thus provides every male member with something to start in life and avoids the necessity of doles. It creates a large number of peasant proprietors with stakes in the land and thus conduces to political, social, and economic stability. Fractionalisation insures an equality of allotment in the various soil blocks differing in their fertility and climatic surroundings. As said above, in a country where the rainfall is so precarious, it is a matter of great importance. The possession of a number of plots in different areas acts as an insurance against the vagaries of the climatic conditions. The rotation of crops has been possible on account of the dispersion of the holdings. The desire to insure against the risks of agriculture in the Indian climate also explains the diversity of crops, or mixed-cropping which provides greater work to the cultivator and thus keeps him busy all the year round. Thus, as Dr. Mukerjee puts it "where cultivation depends upon the uncertainties of rainfall the scattered distribution of holdings in different soil areas is itself an agricultural advantage". This

advantage of security against uncertainty of seasons disappears when the soil is of uniform quality; and fragmentation then becomes an unmitigated evil. Another point in favour of fragmentation is said to be that it distributes the risks inherent in agriculture. It is further pointed out that consolidation of holdings will be more useful with homesteads which will mean separate wells and increase the risk of dacoity and burglary but it can be remedied by judicious consolidation so that a number of families can live in groups close to their farm. Any scheme of consolidation must have these points in view otherwise the remedy may be worse than the disease. Large holdings and capitalistic farming on the English models, as suggested by Prof. Jevons, would not do in India. Here on account of the climatic, economic, and social conditions the aim should be small-scale, intensive agriculture and peasant proprietors. However, subdivision and fragmentation when carried to undesirable extent lead to serious evils.

This "pepper-pot distribution of holdings in scattered fragments" leads to inefficiency of the agricultural industry, and causes underemployment and forced idleness of the cultivators. This enforced idleness is usually accompanied with agricultural indebtedness which seems to be both a cause as well as an effect of excessive subdivision of holdings. The scatteredness of the fields and their distance from the village homes cause trespassing and encroachments which are very fruitful sources of litigation and disputes among the village folk. The wrong shape and size of the holdings and their morcellement cause a waste of time, labour, manure, and cattle-power, prevent maintenance of right levels; waterlogging which results from inadequate drainage causes the impoverishment of the soil and poor crops. The scattered strips prevent any permanent improvements on the land by way of constructing wells for irrigation. "The present scattering of parts of a holding in different parts of a village often makes it impossible to build masonry wells, to make permanent improvements, to protect from surface washing, to intercultivate, to organise the employment of hired labourers, or even to adopt

really intensive cultivation by hand labour which is the small-holder's supreme advantage." The smallness of the holdings means small agricultural profits and this reduces the power of resistance among the cultivators against droughts or scarcity and spells poverty. The security of the cultivator for getting loans diminishes with every subdivision and fragmentation and this compels him to pay higher interest to obtain capital from the money-lender. According to Dr. Mukerjee, "If the process continued women in Gorakhpur might be compelled to draw the plough." Excessive subdivision and fragmentation prevents even the profitable employment of a plough and a pair of oxen and thus the farmer is driven to depend on his spade. The scatteredness of the holdings increases the cost of production and reduces the net yield of the fields. Mr. Shyam Bahari Misra in his Report on consolidation of holdings in U. P. in 1924 estimated that expenditure on cultivation of land increases by 5.3% for every 500 metres of distance for manual labour and ploughing, from 20 to 35 per cent for transport of manure, and from 15 to 32 per cent for transport of crops. It has been further observed that with the existing methods of cultivation, the income from farming on compact holdings increases by 20%.

The evils, however, are not only confined to these. All operations in agriculture become difficult and inconvenient. The fields near the village are apt to be cultivated more intensively, over-worked and impoverished so as to cause diminishing returns without heavy manuring, which is not possible, while the outlying fields are apt to be underworked and neglected. In canal areas there is the waste of a good deal of time in irrigating small and scattered fields. A considerable area of land is wasted unnecessarily in boundaries, hedges and paths. Investigations in the Punjab have shown that 5% of the land is left uncultivated and 1% is taken up by boundaries. The larger the number of plots in a holding the greater is the area taken up by boundary marks. Much of litigation and quarrel in the villages are due to disputes over boundary marks. Even the reali-

sation of rents from too many small holders becomes difficult and inconvenient. Fragmentation and dispersion of the fields makes it very difficult to watch and supervise, prevents the growth of valuable crops and the introduction of labour-saving devices or machineries. The open fields, which result from this necessitate a degree of co-operation among the farmers as regards sowing, weeding, harvesting etc. all of which must be carried on simultaneously in all the neighbouring fields. For instance, if a small cultivator grows cotton in his field his neighbour also must do the same and cannot grow wheat or any other crop which ripens earlier. The different operations would otherwise lead to trespassing in the lands of others and cause disputes. This uniformity in the system of cultivation and cropping makes it inconvenient and unprofitable to sow improved seeds or to introduce any improvements by an enterprising farmer. Then the absence of fences facilitates loss by theft or damage to the crops by stray and wild beasts. The washing away of the soil by monsoon floods cannot be prevented by embankments on account of this subdivision and scatteredness of the plots. The fractionalisation has made fallowing impracticable as also double or mixed cropping and has thus caused soil depletion. Finally, in the words of Dr. Mukerjee, "intensively fragmented holdings not only make agriculture inefficient and unremunerative but also make it impossible for the cattle to be maintained in adequate numbers". Moreover owing to the existing layout and congestion of population in the village there is no accommodation for the cattle and the small and scattered holdings prevent the development of home-steads on the fields.

To sum up: Subdivision and fragmentation of holdings impede current cultivation and waste time, labour and cattle power etc., even permanent improvements and make the use of labour-saving devices and manures unprofitable; make watching of crops very difficult and expensive, entail difficulties of roads and water channels, cause enmity among neighbours leading to litigation and permanent ill feeling, cause waste of land in

hedges and boundary marks, prevent a man from living on his farm and an orderly organisation of capital and labour and produce an uneconomic situation and so make the agricultural industry inefficient and unprogressive. ✓

Remedial Measures:—Consolidation of holdings is the only escape from these serious evils of subdivision and fragmentation of holdings. It is not to be inferred from this, however, that we are in favour of large holdings and capitalistic farming. Even small holdings are economic if they do not suffer from fragmentation and scatteredness. Our discussion so far has shown that on account of the peculiar climatic conditions and rainfall, of social institutions and the nature of the crops and the soil as well as the availability of market facilities small holdings intensively cultivated should be the ideal aimed at.

The chief measures so far adopted to remedy the evils comprise the following: (a) Voluntary consolidation (b) Cooperative societies for the consolidation of holdings (c) Legislation to restrict the alienation of land (d) limitation of succession to a single heir (e) refusal of the government to recognise uneconomic holdings.

Consolidation can be carried on by private agencies through mutual agreements to exchange their scattered and fragmented plots, but it has been found to be very difficult in every country where it has been tried. Voluntary consolidation involves cumbrous legal procedure and heavy expenses which is a serious hindrance. Then the diversity of tenures and instability of tenancy rights add to the difficulties. And at the top of all this there is the illiteracy and ignorance of the cultivator which prevent a right appreciation of the necessity for consolidation. Jealousies and animosities stand in the way of mutual agreements. Hence, the necessity of legislation has been felt everywhere.

The work of consolidation on cooperative basis began in the Punjab in 1920. Through propaganda and persuasion by meetings and lectures all parties interested in land are made to

accept bye-laws by which the majority approves repartition and the actual adjustment is carried on to the contentment of every individual. The work has been done through the Patwaries and the Kanungoes who act as Inspectors and Sub-inspectors on small salaries. A cooperative society is formed of the people and is registered now after repartition. The work has been very successfully carried on in the districts of Gurdaspur, Jullundar, Hoshiarpur, etc. There were 1,117 societies in 1935 carrying on the work of consolidation and 5,77,512 acres had been consolidated. By 1937 this acreage had increased to 7,91,358. The result of this experiment has been very encouraging. Rent have risen, yield of crops has increased, new and waste land has been cultivated, and wells have been sunk to irrigate, waste of land in hedges and boundary marks has been removed and consequently disputes and litigation have declined. The village records have been simplified and the cost of future settlement has been lessened, improvements in communication have taken place and the lay-out of the villages has been improved. Consolidation has proved to be one of the safest and best investment for the government and standard of living and farming among the cultivators have increased. It has been suggested that the success in the Punjab is due to many special circumstances like the simplicity of the land tenures, the homogeneity of the villages regarding land and population, the new cultivation of the canal colonies, and the keen interest taken by the officers of the cooperative and agricultural departments there.

The Royal Commission on agriculture, however, recommended very careful enquiries into local difficulties in the copying of the Punjab plan in other provinces before the experiment was given up as unsuitable to them. After examining the evils of subdivision and fragmentation among both right-holders and cultivators it came to the conclusion "that the evil effects of subdivision and fragmentation are recognised but measures to cope with them have not been decided upon. Its evil effects

are so great that the administration should not rest until a remedy has been found. It is useless to think of real enduring agricultural progress without consolidation." It urged very strongly the undertaking of propaganda work by the state and the bearing of the initial cost.

As regards United Provinces, where the problem is more acute, as early as 1912 Mr. Moreland suggested 'restripping of land to give a compact holding to every cultivator but the proposal was opposed by the Board of Revenue which was not prepared to go beyond reorganising or reforming the village agricultural system in homogeneous areas. Then Mr. Misra reported in 1921 and made recommendations for consolidation which were not accepted by the government. The Government favoured consolidation through cooperative societies. On cooperative basis then like the Punjab, the work began in Saharanpur district in 1925, in Bijnor in 1928 and in Moradabad in 1933. Upto 1935 there were 68 societies only in all these districts. Besides this restripping has also been carried on under the inspiration of certain officials in two estates in Basti and Kalakankar.

Restrictions on alienation have been placed only in the Punjab canal colonies; and in certain cases succession has been limited to a single heir. This, however, as Profs. Jathar and Beri say, has not served to prevent subdivision of cultivation. In the United Provinces Regulation of Agricultural Credit Bill the Government has proposed that the land of a proprietor, who does not pay more than Rs. 250 as land revenue, cannot be permanently alienated without the sanction of the Collector.

Refusal of the government to recognise uneconomic holdings is possible only where it is the land-lord as in the ryotwari tenures but this by itself cannot prevent subdivision beyond the minimum prescribed.

As regards legislation, the Central Provinces led the way by passing the Consolidation of Holdings Act in 1923 and the Punjab followed by passing the Consolidation of Holdings Act

in 1936. The Act was applied to the Chhatisgarh division and authorised one-half permanent holders with two-thirds of the village area occupied to apply for consolidation. Over 100 villages have been consolidated. The Central Banking Committee records that 502 villages have been consolidated. Baroda tried legislation but it has failed to achieve anything appreciable or substantial. In March 1939, the U. P. Consolidation of Holdings Bill was introduced and it has now been passed into law.

*Suggestions :—*Falling short of the modification of the laws of inheritance it has been suggested that the Hindus should carry on joint farming without partition and that the Mohammedans should follow the Egyptian plan where, inspite of the distribution of the land among the heirs, only one of them cultivates the land on behalf of all. Then it is often suggested that the laws of succession should be changed but drastic modification of the laws should be done with caution to avoid the creation of a landless proletariat in a country where there are no adequate industries to absorb the dispossessed population. Hence, schemes of consolidation and agricultural improvement should go hand in hand with schemes of industrial development both in the rural and urban areas, and wherever practicable colonisation should be developed. A regular extensive and intensive propaganda should be carried on to educate public opinion in favour of consolidation and then a premissive legislation should be passed to enable a majority of right holders to effect consolidation against the opposition of a recalcitrant minority. As we have seen above it has been done in other countries. Dr. Mukerjee has suggested consolidation of cropping as a more practical and immediate programme to ensure facilities of irrigation, introduction of better seeds, fertilisers and implements and cooperation in the routine of agricultural operations and prevent theft or cattle trespass. The experience of the tube well areas in these provinces justifies the experiment.

For the greater effectiveness of voluntary efforts at consolidation in addition to propaganda and the bearing of the

initial cost the government should bring consolidation of holdings during settlement operations. The landlords should be encouraged to accept *chakbant* and *patbant* partitions by the grant of special reductions in the cost of partitions and should encourage propaganda in this behalf by promotion of officials who persuade people to accept *chakbant* partitions. Legal and economic difficulties in the way of consolidation by exchanges should be removed, and such exchanges should be exempt from registration fees and stamp duties. The undisputed rights of the holders in the land exchanged should be upheld. The right of pre-emption on vacant lands round about the holdings of individual cultivators should be granted, and there should not be a wide latitude for appeals. Liberal grants of takavi loans for long term should be given to effect permanent improvement on the land consolidated.

CHAPTER IX

Marketing of Agricultural Produce

The absence of any marketing organisation for agricultural produce is one of the fundamental drawbacks of Indian husbandry. In the earlier days of the self-sufficiency of the village there was very little production for sale. The opening up of the country by means of roads, railways and steamship routes has, as we have seen earlier, transformed radically the old economic structure and, has converted the whole country into one compact and homogeneous market. The Suez Canal has come as a powerful adjunct to it. Hence, the problem of agricultural marketing.

*Defects in the existing organisations:—*The existing financial exigencies of the peasant's position preclude him from reaping the best profits for his produce which the recent organisation of trade and communication have made possible. The system of rural finance in which the money lender is both a graindealer and moneylender has placed him in a peculiarly advantageous position of control and with the development of communication and transport a large number of middlemen between the producer and the ultimate consumer have come into existence. The lion's share of the cultivator's profits is eaten up by them. The village mahajan in his dual capacity of a money lender and a grain dealer had tyrannised over the indigent peasant unscrupulously for a very long time. Then, the financing of the export trade through the commission agents is highly defective. These commission agents with their head quarters in the port-towns advance loans to the local dealers and they in turn advance it to the cultivators. The cultivator is too small a unit and that, too, an isolated one, to allow any direct dealing with the export merchants. Therefore, the village bania collects the local produce from the village markets

in small dribblets and carts it to the nearest mufussil station. In most cases the village Bania is the sole purchaser in the locality and in the face of large supply but limited demand he dictates his own price to the poor cultivator who rushes to a glutted market to down the price to his own disadvantage; on account of his poverty and indebtedness, and his urgent need for money to pay rent and interest, he cannot wait for a better turn in the price. Thus, the village baniya guided by his profit-seeking instinct intercepts much of the profits of the cultivators who get just about half of the price of the produce. According to the wheat Marketing Report of 1937 the farmers get only 1/9 out of a rupee which the consumer pays for wheat. This can largely be accounted for by the long chain of middlemen.

The cultivator is illiterate and ignorant, has no knowledge of the fluctuations of prices or of weighments or accounts and deductions. And even if he has a knowledge of the changes in price, the fundamental weakness of his financial position prevents him from realising better prices. In majority of cases he has borrowed against the standing crops and he is compelled to dispose of his produce to the same person who has lent to him. He is not able to sell in a free and open market. There is an absence of adequate information through market surveys and reports except in big towns and commercial centres.

There are no standard weights and measures and the village baniya often weighs the produce to his own advantage. The weights and measures differ from place to place and from product to product. The wheat maund for example is not the same as in sugar and according to the Indian Central Cotton Committee the maund for cotton varies from $21\frac{1}{2}$ seers to 80 seers in the Eastern Khandesh. Sometimes there are separate units for buying and separate for selling. Then there is no uniformity in the quality of the produce, and, therefore, it becomes very difficult to standardise the produce by grading and sampling etc. Dealings in graded produce economise time, labour and money. Then, there is a good admixture of goods and damping. They

are not properly cleansed and the adulteration results in a further disadvantage. Then, there is an utter lack of means of communication and transport (roads, bridges, and railways) in the rural areas. Most of the roads and the railways are trunk lines and not feeders, which link the country side with the collecting and distributing centres. Recently there has been a move in this direction but still it leaves much to be desired.

There are no adequate storage facilities available in the villages or in the village markets. In some places commission agents maintain storage godowns but in majority of the cases there are no storage works. The village cultivator usually stores his produce in Khads i. e. in kaheha pits with layers of leaves and straw lying in between different grains. This leads to a deterioration in the quality of the produce, because during the rainy season some part of it gets rotten and the weevils and rats play havoc if it is stored in big earthen pots. To avoid this loss the cultivator is compelled to sell his produce as soon as possible at any price which he can get.

The small, scattered and fragmented holdings prevent the dealing in bulk with up-to-date marketing methods. Export grading, packing, efficiency in transport, warehousing, finance and insurance cannot be availed of. On account of this impossibility of dealing in bulk, storage works like the elevators of Canada cannot be thought of.

There are a number of malpractices. Weighments are not made in the presence of the cultivators and no formal receipt is given, no allowance is made for samples taken for inspection by the prospective buyers. Prices are not settled openly but in secret under cloth. The other party to the bargain is better equipped in knowledge and better organised while the cultivator on account of his ignorance usually suffers in bargaining. Moreover, there is no premium price on improved crops.

In some cases the commission agent deals for both the parties and receives commission from them but he usually

favours the buyer. There are a number of unauthorised deductions from the price agreed to. Arbitrary deductions for religious and charitable purposes, allowances for drawing for the staff and for higgling and staking by the dalals usually fall upon the cultivator. An exaggerated burden or tare-weight allowance is made as also for admixture, of alleged inferiority in quality. Moreover a charge called Dasturi is also made by the contractor of a village market for permission to the cultivator to sell his produce in the local bazar or paimth. Other deductions are for pinjra pules or ganshalas and for portage. In the words of the Royal Agricultural Commission "Some of the practices obtaining in the market amount to nothing less than common theft."

Finally there is an absence of properly regulated and organised markets and of combination among cultivators which prevent them from getting a fair and reasonable price for their produce.

✓ *Recent improvements in Agricultural Marketing :—* With a view to remove the existing evils and malpractices in the preparation of the produce for the market i. e. damping, adulteration and admixture and to facilitate the handling of the produce in bulk and its sampling and grading legislation has been resorted to in various cases. At the instance of the Indian Central Cotton Committee, the Cotton Transport Act was passed in 1923 which protects important staple cotton areas against outside imports except under licence and thus prevents the adulteration of the staple varieties by mixing imported inferior quality cotton. Then in 1925 the Cotton Ginning and Pressing Factories Act was passed which controls the ginning and pressing factories to a certain extent and marks with a press mark and serial number all bales of cotton pressed so that they may be traced to their factories and the adulteration. Then in 1927 The Bombay Cotton Markets Acts was passed which regularises open cotton markets and frames rules for their regulation which are administered by a market committee containing a representative of cotton growers as well. This act protects the growers against the existing malpractices. Similarly, the Hyderabad Market

Act of 1920, the Madras (commercial crops) Market Act of 1933, the C. P. Cotton Markets Act of 1935 have been passed to check adulteration and develop better marketing. Similar legislations have been introduced in the Punjab and U. P. legislatures also for the establishment of regulated markets. Agriculture departments have also been trying to effect improvements apart from the efforts at improving the methods of cultivation. Then since 1937 the governments of U. P. and Bihar have regulated the prices of sugar cane and of the marketing of sugar. This principle of a regulated marketing should be extended to other crops as well.

The Royal Commission on Agriculture in India had recommended the establishment of regulated markets on the model of Berar and Central Provinces regulated markets and the conducting of marketing surveys and appointment of marketing officers under the Agricultural departments, but on account of the financial stringency the provincial governments were not able to give effect to these recommendations. In view of the importance of agricultural marketing as an aid to the general economic recovery the Government of India decided to give effect to the recommendations of the Commission which were generally endorsed by the Central Banking Enquiry Committee regarding marketing surveys. It was decided that a highly qualified and experienced marketing expert with practical knowledge of agricultural marketing in other countries should be appointed for a limited period, that such an officer with his necessary assistants should be attached to the Imperial Council of Agricultural Research to investigate marketing problems, formulate schemes for improvements and make recommendations regarding standard grades for various commodities and advise both central and provincial governments on matters relating to agricultural marketing. The now marketing policy of the government was based on the recommendation of the Provincial Economic Conference of 1934 and envisaged a collaboration between the provinces and the native states. In pursuance of this policy

now there exist central and provincial marketing staffs. On 1st January 1935 the office of the Agricultural Marketing Adviser to the Government of India was constituted at Delhi and now consists of Mr. A. M. Livingstone as Agricultural Marketing Adviser, three Senior Marketing Officers, three Marketing Officers, one Supervisor for experimental grading and packing stations and twelve other assistant marketing officers. The provincial marketing staffs consist of a Senior Marketing Officer and Junior Marketing Officers. Ninety-two full time Marketing Officers are operating through out India and Burma and of these, thirty-two assistant marketing officers have been provided in the provinces out of grants made by the Imperial Council of Agricultural Research, and those provinces and states, where no senior marketing officer is shown, the Director of Agriculture supervises the work of marketing officers. In addition to these two-hundred and twenty six officers deal with marketing questions in smaller states; and Coffee, Cotton, Jute, Lac and Sugar All-India Committees have their own marketing staffs working in close association with the central and the provincial staff.

The chief work of this new marketing organisation so far has been the conducting of marketing surveys touching the problems of production, distribution, whole-sales, manufactures, transportation, storage and preservation, and prices and quality of the products. As many as 360 local marketing surveys had been made and compiled by the Central staff upto 1937. Marketing surveys had been held for rice, wheat, linseed, groundnuts, tobacco, coffee, fruits, milk, eggs, livestock and hides and skins, and also in respects of markets and fairs and cooperative marketing. After these surveys on the recommendations of the Delhi conference of 1936 survey works are being carried on in barley, gram and maize, coconuts, mustard seed, rapeseed and toria, mangoes, potatoes, sheep and goats wool and hair, and butter and ghee, markets and fairs, and fish and cashewnuts. During 1938 marketing surveys were being conducted concerning oranges, apples, mangoes and some other

fruits and special staffs were engaged on surveys of jute, coffee, lac, and sugar. A few all-India market reports containing much valuable information about the various commodities like Wheat, Linseed, Eggs have been published while those on tobacco and grapes are in their final stages. Besides this survey work, attention has been paid to the standardisation of the commodities. Market samples concerning various commodities from all over the country have been collected and analysed for their physical and chemical properties. During 1938 special attention was paid to the analysis of sugar, lac and butter.

As a result of these surveys and analyses the Agricultural Produce (Grading and Marketing) Act was passed in 1937 for fixing grade designation, specifying grade designation marks and defining standards of quality. Under the Act the Agricultural Marketing Adviser has been empowered to issue certificates of authorisation to such persons as are ready to grade and mark their produce. Since then rules regarding eggs, tobacco, hides and skins, ghee, grapes, oranges, apples, mangoes and plums have been published and the addition of rice, ata, cotton and fruit products is under consideration. In the beginning in 25 centres the grading and marking of different commodities at several important producing centres was done by the central marketing staff to give a lead and this has been followed by establishment of others with the cooperation of the provincial and state marketing staffs. Within the last two years 20 grading stations for eggs, 5 for hides, 2 for ata 13 for fruits, and 18 for ghee had been established. As a result of proper grading the producers especially of eggs and fruits, ghee and other dairy products get better prices in some cases over 25% more than the ungraded products. So far about 20 lakhs worth of graded produce of all kinds have been put on the market. Special attention has been given to hand-grading to reduce the incidence of grading cost in eggs and fruits.

It is, however, the grading and marking of ghee which has been most popular of all these grading experiments. Upto Nov.

1936, 10 firms had graded about 22,000 maunds of ghee worth 11 lakhs of rupees. A Central Ghee Control Laboratory has been established at Cawnpore to analyse the melt samples from merchants' laboratories to control through check analysis the quality of AGMARK ghee.

In addition to the grading of internally traded commodities tobacco and mangoes have been graded for export. In 1938 the Indian Tobacco Association at Guntur exported 433 bales of graded tobacco for Rs. 81,000 to U. K. and during the first half of 1937 nine tons of AGMARK graded mangoes were sent to London with success.

A great progress has been made in the fixing of uniform contract terms concerning white wheat, linseed and groundnut in cooperation with trading interests all over the country and with a view to limit the amount of refraction and to encourage the sale of clean produce by inserting mutual allowances in the contracts. They have been adopted by the principal trading associations. Besides these activities, the cultivators are being familiarised with the modern methods of marketing by demonstrations, agricultural shows and exhibitions all over the country by marketing staffs. With regard to transport, experiments have been conducted to find out suitable containers for eggs and fruits etc. and commercial possibilities of cold storage transport have been studied, and special freight rates have been arranged with railways for these two commodities. For the regulation of markets and market charges legislation is under consideration in the Punjab, U. P., Sind, N. W. F. P., and Mysore etc., while several states are considering the passing of legislation similar to the Agricultural Produce Act of 1937.

Finally, with regard to market information and news, weekly broadcasts from the Delhi Radio Station are made regarding prices, stocks, and movements of wheat, linseed and rice, and daily closing rates at Hapur market relating to wheat, barley, gram, peas and arhar are also broadcasted. Along with the Hapur rates twice a week the latest available prices of jute

bags are also sent. Similar steps are being taken by the provincial marketing organisations to provide marketing news agency. A scheme of market intelligence service to keep the dealers at exporting centres informed of the prices of cows and buffaloes at Bombay and Calcutta is under consideration.

During 1933 three conferences were held; one for ghee at Bombay which fixed the standards in Kathiawar; the other for hides at Cawnpore which constituted a fund for rewarding the best slayers; and the third at Bangalore for coffee. And finally in November 1938 the Conference of Ministers of Provinces and States at Delhi reviewed the entire marketing scheme and considered future lines of active development and of correlation of agricultural marketing and production.

In march 1939, an Agricultural Produce Markets Bill was introduced in U. P. and has been considered by both the houses of the legislature. The main objects and aims of the Bill are:

(a) Generally to ensure that the producer gets a reasonable share of the ultimate value of his produce; (b) to regulate the scale of market charges; (c) to ensure the maintenance of standard weights and measures; (d) to secure effective control over markets through market committees on which producers will be adequately represented; (e) to provide for the licensing of market functionaries; (f) to improve the conditions under which agricultural produce is sold by providing better shelter, water and sanitary arrangements and constituting a market committee fund for the purpose; (g) to assist in the collection and dissemination of reliable market prices and crop statistics.

In October 1939 the fifth conference of the senior marketing officers in the provinces and states and the central marketing staff considered measures to be taken to keep in touch with current prices, visible stocks, and available supplies of essential commodities to control prices during the present war. The conference decided that price fixing should be adopted only in special cases after consulting all interests. It laid emphasis on the ensuring

of free play of demand supply and competition and advocated the strengthening of the marketing staffs in the various provinces and states and a machinery for co-ordination of the work of the various marketing staffs. With a view to ensure that producers participated in any general price rise and to reduce the margin of distribution between producers and consumers, as well as affording a proper basis for price quotation, it drew the attention of the provincial and state governments to the passing, as speedily as possible, of pending legislation for the registration and regulation of markets, control of markets, control of market charges, licensing of market operators and the introduction of standard weights. It further recommended that these governments should consider the desirability of taking immediate powers to control futures trading in agricultural commodities, particularly for limiting the range of daily fluctuations in 'satta' prices. To assist smaller Indian shippers the introduction of some system of export and import credit facilities was recommended. After reviewing the work done so far in different spheres and progress of legislation in regulation of markets, the conference considered proposals for the opening of new grading and packing stations in respect of ate, rice, linseed, groundnuts, tobacco, fruits, fruit products, potatoes, eggs, ghee, hides, edible oils, vanaspati and cotton at different centres. Eight grain grading stations have recently been planned to be established in various parts of the Ganges Doab in the United Provinces. The problem of transport and broadcasting of the prices were also considered.

*Suggestions for further improvements:—*A perusal of the various activities of the new marketing organisation shows that so far the government have done nothing to provide suitable warehousing facilities and standard weights and measures. The Central Banking Committee recommended that the provincial governments should finance the construction of private warehouses and issue licenses to them and that their efforts were to be coordinated by the Imperial Council of Agricultural Research;

that the Railway Board should encourage the railways to star warehouses at market centres, and that the cooperative societies were to be granted long-term loans at cheap rates of interest for establishing godowns in different market centres. These warehouses would enable the financing of the movement of the produce on the security of the warehouse certificates by cooperative and joint stock banks and would thus enable the producer to withhold his product from the market for sale at a favourable turn of prices. If the cultivator is to get any advantage of the improved marketing facilities he must be enabled to deal in bulk and this is possible only when cooperative marketing and sale societies are established in every village and there are pucca khatties or warehouses to store the grain to prevent damping and facilitate grading.

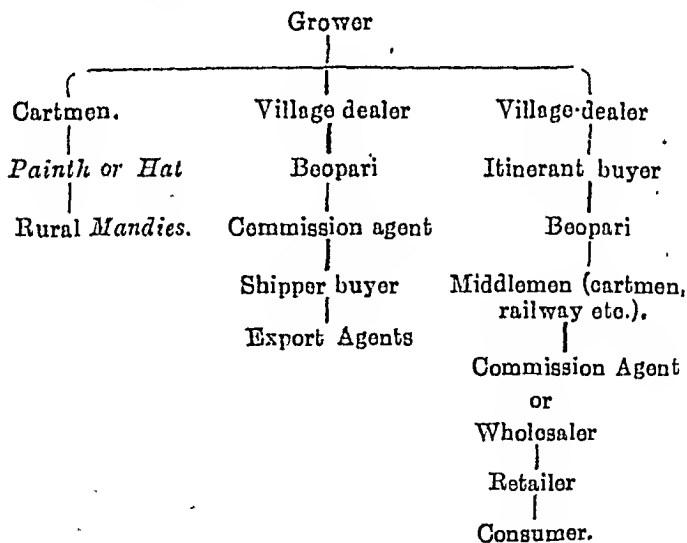
The standardisation of weights and measures has been very strongly recommended by the Agricultural commission and by the Banking Enquiry committees. A committee was appointed at the instance of the Government in 1913 to investigate into the matter but no action has yet been taken on its recommendations. The matter should be investigated again at an early date and general principles should be laid down to be observed by the provincial governments without undue interference with local trade customs. In 1928 an Act called the C. P. W. and M. of Capacities Act was passed and a similar act has been passed in Bombay in 1935. The Marketing Officers Conference at Simla in 1937 recommended the standardisation and adoption of the following all-India weights. 180 grains=1 tola; 80 tolas=1 seer; and 40 seers=1 maund. This should be universally adopted and the other provincial governments should pass legislation like those of C. P. and Bombay. Standardisation of these weights was the object of legislation in the Central Legislature in 1938.

Cheap and adequate transport facilities should be provided by constructing feeder roads and connecting them with rail-heads. Since the report of the Jayakar Committee a Special

Road Fund has been created and the provincial governments have made rapid strides in constructing roads in the rural areas. But still there is much to be done. The provincial governments should so far as possible grant loans to the local governments for this purpose. There is a lot of complaint is heard with regard to the supply of waggons, freights and malpractices of the railway staff. Adequate number of waggons are not provided by the railways for the transfer of agricultural produce; the freight rates are high, and pilfering and damage in transit are very often done. These defects and complaints should be removed. For the transport of fruits and dairy products and other perishable commodities special waggons and cold storage facilities and low freights should be provided. The local marketing staffs have been able to secure over 100 reduced freight rates on 27 graded commodities, in seven provinces during the last two years. These improvements will lead to a reduction in the cost of distribution.

Then to free the cultivators from the thralldom of the money-lender and the Beopari and thus to provide them with free and open markets for their produce, co-operative credit societies, purchase and sale societies and co-operative land mortgage banks should be established. Co-operation by providing facilities for pucca storage works in the villages will facilitate the standardisation and grading of produce, will encourage further specialisation in agriculture, will secure the advantages of dealing in bulk both in sale and purchase of goods and will prevent admixture and damping etc. The collective securities of the member cultivators of the societies will lead to cheaper finance, lower interest rates and secure better accommodation on the security of agricultural bills and warehouse certificates even from commercial banks. In fact multi-purpose co-operative societies offer the best solution of the problem of agricultural marketing where holdings are small, subdivided and fragmented, and the producers are isolated and economically weak units. If co-operation fails, with it will fail the best hope of rural India

Recently great progress has been made in the marketing of sugarcane by the development of marketing unions in the various parts of our provinces and Bihar. In the recent conference of the officers of the U. P. Co-operative Department it has been decided to organise marketing unions for sale of agricultural produce in general in as many important *mandies* as can be conveniently done. It has further been decided to employ 162 supervisors and 15 inspectors early in March, for marketing work. For the sake of convenience it has been decided to start marketing work in villages where rural development work has already gone ahead. The question of organising co-operative stores in mill areas was also discussed. Co-operation would also help in eliminating the unnecessary middlemen. The ordinary chain of middlemen at present between the producer and the consumer is as follows :—



Illiteracy and ignorance should be removed by education of adults through night and adult schools and in this work students can play a very useful part in their spare time in vacations. More Primary schools should be established in the

rural areas. The powerful drive against illiteracy started by the popular ministries since last year has evoked a very encouraging response from non-official agencies and in some parts of the country students have played a very important part in it. Facilities for marketing intelligence should be increased by opening more post offices and telegraph offices in the rural areas and by opening reading rooms and libraries. The opening of moving libraries as part of the rural development work in rural development circles and of supplying of newspapers etc. at state expenses during the stay of the popular ministries was a very laudable work and should be strengthened. Greater facilities for broadcasting market news in suitable ways from radio stations should also be provided.

Finally, properly regulated markets on the lines of the Berar and Bombay models with dealings in futures for hedging and minimising the risk of price fluctuations should be established in other provinces. A market committee should be entrusted with the management of such markets. To prevent fraudulent weighment, a weighbridge with suitable arrangements for its use should be installed in the markets and to settle disputes, a board of arbitration consisting of three members, one nominated by the buyer, one by the seller and a third to be chairman and to be selected by both the parties from the market committee, should be constituted. The market committees should be authorised to regulate weights and measures, to license weighmen and measurers, and to control malpractices and heavy deductions.

CHAPTER X

Rural Finance

Credit is of the essence of agriculture. For a successful operation of agricultural industry the cultivator requires cheap and adequate credit. But inspite of this fundamental necessity of credit in agriculture it is notorious that the supply of credit through the various agencies serving the rural areas in India is not only inadequate but also very dear. The reasons for this are not far to seek. They are found mostly in the nature of agricultural industry, the economic position of the cultivator, and the social and economic conditions in which he is placed. As to the nature of the industry, agriculture is a seasonal and hence intermittent industry and suffers from seasonal vicissitudes. The vagaries of the Indian monsoon are proverbial. Only 16% of the total area cultivated receives irrigation from rivers, tank or well, and the remainder 84% depends for an adequate supply of water on rainfall, the major portion of which is derived from the South West monsoon. The Indian rainfall, as pointed elsewhere, suffers from two serious defects, namely, the unequal distribution from one part of the country to the other and from season to season or its irregularity and its possibility of failure. This renders our agriculture an extremely precarious industry and makes the budget of the Government a virtual gamble in rains. The frequency of the failure of the crops due to drought and flood and pests and the low vitality and high mortality of the live-stock render the economic position of the cultivator worse still. To add to his difficulties his holdings are very small; fragmented and scattered and, hence, uneconomic; which is inadequate to maintain an agricultural family in ordinary comfort in conditions which exist in India at the present day. Agricultural incomes are too low because of the low productivity of land. The produce from land per head

of the population and per acre is low in comparison with that of other countries. The average cultivator in India still continues to live in an insufficiency of food which reacts on his physical capacity for work and largely accounts for the high percentage of mortality in the country.

Another potent factor which contributes to the weakness of the cultivator's economic position is the inadequacy of subsidiary occupations to supplement his slender income from agriculture. There is an utter lack of suitable subsidiary trades and, therefore, the numbers who have no other employment than agriculture are in large parts of the country greatly in excess of what is really required for successful cultivation of the land and they eat up the profit that would otherwise spring up from the industry of the agricultural community. Although the agriculturist has sufficient spare time to engage in subsidiary occupations, yet he is unable to do so, because unfair competition from machine made goods has killed the cottage industries. Even agriculture has been adversely affected by world competition as is proved by the fall in the world prices of cotton, rice, wheat, jute and groundnut etc. in recent years and the Government has failed to mitigate its consequences to the farmer. Then the precarious and limited rights in land which the average cultivator possesses not only cause inefficient cultivation but prevent also the land from being a valuable security for credit. He has neither the organisation nor the credit facilities available to debtors in other countries. His illiteracy and ignorance further weaken his position.

Still another factor which aggravates the weakness of his economic position is the absence of a well developed and organised system of rural transport and the absence of suitable marketing facilities. He carries on production mostly on a small scale and with his uneconomic holding he is prevented from taking full advantage of the concessions which transportation usually give to large scale sellers and purchasers. There is an absence of good and metalled roads in the rural areas

and during the rainy season specially outside contact with the villages becomes very difficult. There are too many middlemen who eat away the major part of his profits.

The religious and social institutions necessitate a huge and unnecessary expenditure on conventional necessities like marriages, funeral obsequies, births, caste dinners and feasts, pilgrimages and kathas and litigation, etc. This leads to unproductive consumption and tends to make the cultivator improvident and extravagant. With a low standard of living, impecunious habits, and low scale of incomes the farmer in India is extremely non-credit-worthy. A joint stock commercial bank receiving the bulk of its deposits on short term and having most of its liabilities on demand cannot afford to lock up its funds in permanent improvements and investments in the land. The personal credit of the borrower being practically non-existent and with the unsuitability of the only security that he can offer, namely land, to a commercial bank, the provision of cheap and adequate credit to the cultivator for a progressive and successful development of agriculture requires a special credit agency whose liabilities are not on demand and which practises not commercial but investment credit.

Credit Needs of the cultivator:—The normal credit needs of the cultivator can be classified into three broad heads: 1. short term credit, 2. Intermediate credit, and 3. Long term credit.

The first two are required to meet current outgoings and to facilitate production e. g. buying of cattle and agricultural implements or hiring them, purchase of seeds and manures, maintenance of the farmer, his family and his live-stock and payment of revenue and rent, and expenditure in items of improvement like irrigation, drainage, fencing, levelling, and clearance etc. The third type of credit is required for permanent investments like purchase of land, acquisition of costly implements, repayment of debt, and consolidation and improvements

of holdings. Besides this the cultivator also requires credit of the either type for marketing and movement of the produce and for small rural and cottage industries. The chief peculiarities of agricultural finance are that it is mostly one man's or one family's credit, the principal need is for long term credit and excepting land all other securities are flimsy e. g. crops & cattle.

Short term loans are required for the expenses of cultivation including the rent and the domestic expenditure which should be spread over a period of 8 to 9 months and should be payable only after the crops are sold. Secondly, such loans must be available at short notice to enable the cultivator to take advantage of the rains and do the ploughing and transplantation as soon as they are possible. Thirdly, the finance must be adequate. Fourthly, the rate of interest should be reasonable. Short term loans are generally seasonal in character and normally they should be repaid in full sometime after the harvest, but in a partial or total failure of the crops, the extension of the period is required.

Intermediate credit is required for the purchase of cattle and farming implements for a period of one to three years.

The essential feature of long term credit is that the sum advanced to the cultivator should be sufficient to start him effectively on his business; secondly, it should be repayable from the margin of the profit of the cultivator without putting him to the necessity of starving his current financial needs, or of borrowing from another source, or of selling his holdings to discharge the loans. That is to say, the purpose of the loan and the repaying capacity of the borrower determine the period of the loan. The chief object of the long term credit by the cultivator is the repayment of the ancestral debt and improvement of his lands and methods of cultivation. The repayment of the loan should be spread over long period and in easy instalments.

There are various difficulties in the way of calculating the requirements of credit by the cultivator on account of his illiteracy and consequent absence of accounts. Still the Central

Banking Committee estimate that the cultivators' requirements for short term and intermediate working capital for the whole of British India is 300 to 400 crores of rupees. With regard to the long term credit requirements they think it impossible to give any approximate figure and say that there is an almost unlimited scope for the grant of long term loans to the cultivators.

Existing credit facilities :—The sources from which rural finance is obtained are the following :—

1. Money-lenders, both professional and non-professional.
2. Indigenous banks and bankers.
3. Cooperative organisations.
4. Government.
5. Commercial banks including Imperial Bank and others.
6. Loan Offices in Bengal and Nidhies and Chit funds in Madras.

Money-lenders :—They may be classified into two broad heads (a) Professional and (b) Non-professional including land-owners and agriculturists as in Madras and Punjab, merchants and traders and casual money-lenders like pleaders, pensioners, priests, widows etc. It is difficult to give the total number of money-lenders or their working capital in British India. About $\frac{1}{4}$ of all money-lenders in British India carry on their trade and live in the Punjab alone. Money-lenders and bankers in India generally carry on other forms of business such as commission agencies and trading. The C. B. E. Committee has drawn the following distinctions between a banker and the money-lender :—

A money-lender is one whose primary business is not banking but money lending ; a banker is one who deals in public money received by him mostly on deposits either current or fixed; whereas a money-lender deals in his own money. He seldom accepts any deposits except when he is in an urban area. The banker finances trade and industry rather than consumption; a money-lender consumption rather than trade. Both indigenous

bankers and money-lenders advance partly with and partly without security but the banker more often with than without, and the money-lender probably more often without than with. A banker is more particular about the object for which loans are taken; whereas a money-lender is less careful. Most of the banker's demands are met by his clients punctually, but those of the money-lenders' have to be pressed and, therefore, the banker's rate of interest is lower than that of the money-lender. The difference is a reflection of the greater trouble and risk involved in the money-lender's business.

Rate of Interest :—There is a confusing diversity of the rates of interest charged from one province to another and the variations between the maximum and the minimum are very wide. It varies from 9% to 75% and in case of the Pathan and the Kabuli it goes upto 300%. On the whole, however, the rates are very high and sometimes they border on usury. Owing to the absence of a rational system of rural finance differentiating between short and long term credit needs the capital of the village money-lender is becoming frozen from year to year and to compensate himself for this loss he charges high rates of interest. The chief causes of the prevalence of such high rates of interest in the rural areas, are the following :—

1. *The nature and adequacy of the security of the borrower* :—The assets of the farmer consist of land, buildings, cattle, crop, utensils and ornaments and other movables. Of these land is the only form of security suitable for long term credit and, of others, for short term credit, are the ornaments of the female members. Ornaments of the cultivator broadly speaking are practically nil on account of his chronic poverty; and besides this there is a sentimental objection against their pledge. The houses are mostly mud-hovels in dilapidated conditions and hence practically useless as a security. The cattle are subject to disease and loss, whereas the crops depend on the vagaries of the rains. Such assets are, therefore, extremely flimsy. Hence, the money-lender lending money under such

circumstances undertakes risks which other organised credit agencies do not, and, therefore, he protects himself against the loss by charging high rates of interest. In other words, the high rates of interest are in the nature of insurance against risks of business.

2. *The monopoly of the village money-lender* :—He is the only financing agency available to the village cultivator and there are places where even such a modest agency does not exist. The joint stock banks for example do not open an account for less than Rs. 100—a big margin for a poor cultivator. And ignorance, illiteracy, conservatism and improvidence, lack of farm accounts, use of the English language, European management and lack of contact between the village and the town consequent upon the lack of adequate communication and transport in the mofussil together with lack of suitable managers and accountants, prevent the joint stock banks from opening branches in rural areas. And in places, where the money-lender works side by side with other organised agencies, the latter do not fully meet the requirement. Due to all these reasons money-lender holds a semi-monopolistic position, and hence, charges a high rate of interest.

3. *Shortness of Capital* :—As the money-lender does not accept deposits and has generally no connection with the money market he cannot replenish himself with surplus funds by borrowing from banks and the result is that the competition drives up the rates.

4. *Lack of education and conservative habits of the people.*

5. *The expenses of collection and management of loans* given to borrowers are much higher than similar expenses of joint stock banks and this fact accounts for the maximum limit of rate of interest being fixed as high as 40% in the English Money-lenders' Act and 42% in the Uniform Small Loan Law of U. S. A.

6. *Urgency of the loan* :—The cultivator requires credit

mostly in times of distress like famine caused by floods and droughts or for inevitable conventional necessities like marriages funeral obsequies and litigation. The money-lender, knowing that the loan is urgently required, and, that without his help the borrower cannot do, charges as high rates of interest as the borrower can afford to pay. Thus, the inability of the borrower to postpone the loan for a futuro date compels him to agree to the exorbitant rates of interest.

The fact that the money-lender is a money-lender-cum-grain-dealer of the villago entrenches him in a very strong financial position, and the low standard of living and poverty of the teeming millions in the rural areas and the inability of the commercial banks due to the causes, we have described above, to supply credit to the village communities, encourage the money-lender to abuse his position as a credit supply agency.

Methods of business :—The methods of business and the system of accounts of the money-lender are very simple but infinitely diverse, varying with the idiosyncracies of the money-lender, the circumstances of the debtor, the nature of the security and the locality. The money-lender usually deals with his own capital. Loans are given on mutual trust without a document and even without a witness. Sometimes they are made on promissory notes when the amounts are large. Sometimes they are granted on simple or usufructuary mortgages of land, houses, ornaments and live-stock. Sometimes Benami loans are also issued where in thumb impressions of the illiterate borrowers are taken and the amounts and date etc. are left to be filled up later on. Conditional sale deeds are often taken with the oral arrangement that the land would be retransferred on the repayment of the debt. Possessory mortgages are common in some cases and rare in others. For ordinary agricultural needs loans are granted on the personal security of the borrower with the understanding that the produce would be sold to the creditor or through him. In many cases the security is mortgage of crops but usually it is mortgage of lands. The

object of the loan and the manner of its expenditure are no concern of the creditor, and compound rates of interest are charged. This practice of compound interest on the principal plus annual interests leads to a fast increase in the debt which crushes the poor peasant under its heavy weight. The principle of Damdupat applied by the court does not take into account the instalments of interests already paid. He combines money-lending with shop-keeping and trading and even with agriculture and this fact places him in a very strong position to tyrannise over the debtors. The advances are made both in kind and in cash. The substantial money-lenders keep a journal and a Bahikhata but the petty ones do not maintain regular books of accounts, except loose leaves and records on note books, bonds and decrees. It is in their case that the rural finance is "a tangled jungle of disorderly transactions". With the changes in law and its administration litigation has increased and the old cordial relations between the money-lender and the debtors have changed for the worse. The debtors try to evade the payment of interest and the repayment of the loans and produce witnesses from among their friends in the village and as the money-lender is usually regarded with contempt by the cultivators on account of his rapacity, it has become very easy to get witnesses against him.

Illicit Practices :—The money-lender on his part is also guilty of many malpractices and extortions in many ingenious ways and is too shrewd and cunning to be inflicted with losses. The U. P. Banking Enquiry Committee point out that the village money-lender charges *ganth* or *giral khulai* which varies between 2 to 6½%, *gaddi kharcha*, *daftar kharcha*, *salami*, *katauti* and *battawan*, *khudai* and *patai* etc. which are prevalent in many parts of the province. Moreover, a few illicit charges are also made at the repayment in very rare cases in some places. Some money-lenders are, however, very kind and reward prompt payment by granting *chhut* or reduction from the amount of the interest due. The most objectionable and dangerous illicit

practices, however, relate to the execution of bonds for sums higher than the advances, and the taking of thumb impressions or signatures on blank papers, which are filled up with the details later on by the money-lender the refusal to accept repayment in instalments and the falsification of accounts, and the manipulation of the interest charges to the disadvantage of the debtor, and finally the taking of conditional sale-deeds to provide against evasion by the debtor. Besides these the charges for writing out the documents registration fees and stamp are all borne by the debtor. It is very difficult to maintain that these expenses are illegitimate. Then the C. P. Committee have referred to a charge known as *multana* made by itinerant money-lenders to the tune of 5 annas on a ten rupee loan and to the payment of a certain percentage to the *munist* of the creditor before a loan can be granted to the debtor. Besides these illicit practices, in Bihar and Central Provinces the debtors have to serve a term of servitude to the creditor which is especially true of the low caste debtors. Then the money-lender is charged also with dishonesty or fraud in advances and repayment of loans in kind, in cattle credit and in the working of the instalment system. Some of these practices, however, are now moribund, and the gradual but steady increase of intelligence among the village folk prevents them from falling an easy prey to the unscrupulous money-lender. The Central Banking Committee assert that these practices are not peculiar to India; they are found in other countries also among certain classes of money-lenders. However, it has been usually seen that the agriculturist money-lender is worse than the professional in his exacting and extortionate habits, and the worst of all the money-lenders are the landlord money-lenders who exercise undue influence to their own advantage through the rent and interest demands for which they can sue their debtors in the civil and the revenue courts. Instances can be multiplied to show indefinitely that the poor peasants have had to pledge all their property and valuables and have been compelled to serve on the

farms of the land-lord money-lenders like the Roman slaves throughout their lives for a mere pittance to satisfy their primary wants, while their wives and children have to do *begar* work in their households. They have also to give *nazrana* and *salami* in marriages etc. to the land-lords.

For his illicit practices, usury and rapacity the money-lender has been very harshly and sometimes unreasonably condemned. Rustic wits like '*Bania mare jan, thug mare anjan*'; '*Na bania mit, na beswa sati*', "*A bania goes in like a needle and comes out like a sword*" remind one of the general feelings of the cultivators about the village *bania* who usually combines trading with money-lending. These, however, seem to be exaggerated views and the *sabukar* is usually regarded with respect by his debtors. It is, however, the facile credit of the money-lender which is very dangerous to the cultivator because it encourages improvidence and extravagance in unnecessary and unproductive expenses. As Mr. Strickland says, "The chief evil in a money-lender's credit is not his high rate of interest or the falsification of books, which is practised by a minority of the class, but the fact that he grants loans for unprofitable as well as profitable objects and in amounts in excess of borrower's means, and does not insist on prompt repayment on a good harvest. His ambition naturally is to see his money well invested and to live on the interest."

It has become the fashion of the day to condemn the money-lender unequivocally for his usury and rapacity for money, but it must be remembered that he forms an essential and indispensable feature of the village economy, and fulfils a very useful place ministering, as he does, to a fundamental need of the rural society. There is no other financing agency in the village to meet the pressing need of the peasant for credit, the Cooperative Societies supplying a very small part of the village needs for credit. He is easily accessible, his methods of business are simple and elastic and he has a close knowledge and experience of the borrowers' conditions which enable him to accommodate them. Credit as

one writer puts it, is by no means a sign of economic weakness; but in the absence of satisfactory conditions for credit, it is sure to degenerate into a serious evil. When there is an economic situation in which the ordinary conditions of supply and demand are not equitable, as they are here, it is possible, but not necessary, that it will always lead to usury. If the moneylender is usurious today, it is not due to his conscientious effort, but it is rather an inevitable outcome of the economic position in which he finds himself, and in the absence of any restraint, moral or otherwise, he is apt to abuse it. However, he must realise that the prosperity of his debtors in the rural areas means added security to him and, therefore, he stands condemned for his illicit practices and the misuse of his power. He is "a dangerous necessity" and his trade must be controlled and properly regulated.

Measures to Regulate money-lending :—Such being the problem of rural finance, in various parts of the country legislation has been passed to control and regulate the business of money-lending with a view to protect the indigent and needy peasant against the tyranny of the money-lenders. The rule of the *Damdupat* in the Hindu law of contract, whereby the interest cannot exceed the principal, has been enforced in Bombay and Berar but it has not been of great help as the courts do not go below the last contract. The application of the principal has now been extended to Assam, Bengal, C. P., Madras, Punjab and United Provinces. The suggestion of the Bengal Banking Committee to limit by general legislation the amount of the interest to the amount of the principal was not accepted by the C. B. Committee.

The *Deccan Agriculturists' Relief Act of 1879* was passed to give legal protection to the agricultural borrower. The transfer of land from the cultivators to the non-cultivating money-lenders had engendered discontent and hatred against the money-lenders and there had been riots in Santhal 1855, in the Deccan in 1874 and in Ajmer in 1891. The Act made it compulsory for the creditors to furnish accounts and issue receipt for all pay-

ments made by the agriculturists and insisted upon the mortgages being in writing. The period of limitation was extended from 3 years to 6 years in case of unregistered suits and to 12 years in case of registered ones. But above all, it empowered the courts to go behind the contracts and to protect the debtors against the oppressive interest rates and to prevent the sale or transfer of land to the money-lender. But unfortunately the Act has remained ineffective and in certain cases its results have been harmful to the cultivators by increasing litigation and limiting supply. The transfer of land both by sale and mortgage has not been checked.

Then the Indian Contract Act has been modified to include within the definition of 'undue influence' any unfair advantage taken by the money-lender and the onus of proving that there was no undue influence exercised by him lies on his shoulders. Again changes have been made in the Civil Procedure Code to the advantage of the farmers. The implements and tools of husbandry, utensils, cattle necessary for cultivation etc. are free from distraint; the cultivator debtor cannot be arrested for his debts on a decree of the court, and he can repay his debts by instalments.

Land Alienation Acts were also passed in the Punjab in 1901 and in the U. P. in 1903 and later on in C. P. and Bombay to restrict the transfer of land to non-cultivating classes but they have not proved beneficial. They have caused the emergence of agriculturist money-lenders who are more rapacious and exacting than the professionals.

The Usurious Loans Act was passed to improve the legal position of the borrower in many ways in 1918. Up to that time the courts ordinarily decreed the interest at rates fixed between the parties and the debtor had only the remedy to plead under influence against unfair bargains. This Act authorised the courts to reopen and examine all loan transactions even in insolvency proceedings, if they had reasons to believe that unfair dealings existed, and the interest rates were unconscionable. It covered both loans in cash and loans in grain and laid

down the various points which the court should take into consideration while deciding cases, and fixing the maximum rate of interest which the debtor should be made to pay; and it applied to all kinds of debtors whether agriculturists or otherwise. It was amended in 1926 to include cases in which either party seeks a relief. The Royal Agricultural Commission held that the act had remained a dead letter and recommended enquiries to be made in every province to find out the causes of its failure. The Provincial Banking Committees accordingly examined the working of the act and found that, although it was not dead, yet it suffered from a number of serious defects. Some of the Committees recommended its abolition but the Central Committee held that the act was of advantage to the debtors in many provinces and that it should be retained. The Committee also did not favour the fixing of a definite statutory limit to the rate of interest on the ground of its impracticability and ineffectiveness. It agreed with the Royal Agricultural Commission that a proper utilisation of the provisions of the Act would remove some of the worst evils of uncontrolled usury and recommended the inclusion of a special report on its working in the annual reports of the administration of civil justice. The Act has been recently amended in several provinces with a view to reduce the rates of interest and to protect the debtors against undesirable extortions and exactions. This has been done in the post-depression period in Assam, Bengal, Central Provinces, the Punjab, North Western Frontier and the United Provinces while similar provisions have been made in the Bombay Money-lenders' Bill 1939. . ~

Finally, legislation has been passed in the various provinces to license and control money-lenders. In many countries measures have been taken to regulate money-lending with a view to protect the borrowers and the Royal Agricultural Commission recommended that the provincial governments should consider the principles of the Punjab Regulation of Accounts Bill, 1926 (since passed into law in 1930,) and the

English Money-lenders' Act 1927. The latter provides for the registration of money-lenders, prohibits incidental charges from the borrower, the enhancement of interest for default in repayment, oral contracts, and compound interest; and insists upon the supply of a copy of the account on demand to the borrower. The chief objects of such legislation are the reduction in the high rates of interest and the controlling of money-lending to remove illicit practices. With regard to the first of these the Central Banking Committee thought that a real and lasting solution of it would be found in the spread of education, the extension of cooperative and joint-stock banking and the training of the borrower in the habit of thrift and saving, and that the proper utilisation of the Usurious Loans Act in all provinces would in the meantime, be sufficient. With regard to the second of these objects they recommended the enactments of the provisions of the Punjab Regulation of Accounts Bill by other provinces. They considered that the periodical statement of the debt and interest supplied to the agriculturist would begin his financial education and, therefore, they were not in favour of either compulsory or voluntary registration of money-lenders. They recommended, however, the introduction of the provisions of the money-lenders' Act except that relating to the compound interest. Among the Provincial Committees the Bengal and C. P. Committees were in favour of compulsory registration, while others except those of the Punjab, Bombay, Assam and U. P. recommended only optional registration. A number of conditions and privileges have been suggested by the various committees which should form part of the licensing measures. It is not possible to go into the details of all these here. The conditions may be briefly summarised as the fixing of maximum and minimum rates of interest, the maintenance of regular accounts in a prescribed form, granting of receipts for all payments, the furnishing of six-monthly copies of the individual accounts to the debtors on demand or otherwise on payment of writing charges, the encouragement of the money-lender to advance loans on the security of warehouse receipts.

and agricultural hundies of six month's usance, the prohibition of money-lending without a licence etc. The privileges which the registered money-lender should enjoy are the facilities in the recovery of debts advanced against agricultural bills and warehouse receipts like recovery of public demands; the persuasion of the banks to advance to the registered money-lenders on the security of the agricultural papers; the granting of the same remittance facilities to the licensed money-lenders as are allowed to banks by the Imperial Bank and to cooperative societies by the post office; and the permission to open current accounts in the post office withdrawable by cheques.

The heavy fall in prices during the period of the depression has led many provincial governments to the grant of relief and remissions of land revenue to the cultivators. They have also passed a number of measures to protect the agriculturist borrowers and to regulate money-lending by requiring the money-lenders to get themselves registered and licensed. These measures are enumerated below :—

Bengal	...	... Money-lenders' Act 1933.
Bihar	...	... do. „ 1938.
Central Provinces	...	... do. „ 1934, Reduction of Interest Act 1936 ; Protection of Debtors' Act, 1937.
Madras	...	... Debtors' Protection Act 1934 ; Agriculturists' Relief Act 1938.
Punjab	...	... The Regulation of Accounts Act 1930 ; Relief of Indebtedness Act 1934 ; Debtors' Protection Act, 1936 ; Registration of Money-lenders' Act 1938.
United Provinces	...	... Agriculturists' Relief Act, 1934, Encumbered Estates Act 1934 ; Regulation of Sales Act, 1934.

. All these Acts embody the principles and conditions which

we have described above and lay down penalties and fines for the breaches of their provisions, and even dismissal of the suits in cases of gross abuses. Punishments for intimidation and molestation of debtors and exemption of their houses, cattle for tillage, crops and land of the smaller holders from attachment or sale in the execution of decrees have also been provided; and in certain cases payment by instalments and other sorts of relief have been granted. The most important provisions are those relating to the maxima and minima of the rates of interest on the secured and unsecured loans as is evident from the following table adopted from Indian Economies by Profs. Jatbar and Beri:—

Provinces	Secured		Unsecured	
	Simple interest	Compound interest	Simple interest	Compound interest
Assam ...	12½	Prohibited	18½	Prohibited.
Bengal ...	15	10	25	10
Bihar ...	9	Prohibited	12	Prohibited
Bombay ...	9	"	12	"
C. P. ...	7	5 with yearly rests.	10	5 with yearly rests.
Madras ...	6½	Prohibited	6½	...
Orissa ...	9	Prohibited	12	Prohibited
Punjab ...	12	9	18	14

In the United Provinces a more elastic system of regulating interest rates has been adopted. The provincial government notifies from time to time the rates in accordance with the conditions of the money market so far as debts incurred prior to

the Relief Act of 1934 are concerned ; and for the subsequent loans the rate varies according to the amounts of the advances falling as the amounts rise.

As Mr. Strickland says, the law merely enables an honest money-lender to offer prima facie evidence that he is honest. Profs. Jathar and Beri suggest a system of state inspection and supervision of money-lenders' activities for a better enforcement of the law as obtains in the U. S. A. The Central Banking Committee also suggested the giving of a pass book to each one of his borrowers by the money-lender.

The effect of these measures, on the whole, so far has been an increased reluctance on the part of money-lenders to lend and the consequent restriction of the supply of rural credit. This is confirmed by the Statutory Report of the Reserve Bank of India on Agricultural Credit. "In areas where such legislation is in force it is said that money-lenders have discontinued lending except to old and trusted clients, and have restricted their loans to a minimum." However, it is not to be deplored, as the limitation of the facile credit will teach the agriculturists to live within their means and to give up their impecunious and extravagant habits. Moreover it will increase the demand for the establishment of co-operative credit societies which will inculcate in them the habit of thrift and saving and confer the blessings of controlled and guarded credit.

(B)

Beside the rural money-lenders, there are other agencies also which supply credit to the rural areas. Among these the most important are the cooperative organisations, the commercial banks including the Imperial Bank of India, the Government, and the loan offices and the Nidhis and chit Funds in the Bengal and Madras presidencies.

Cooperative credit institutions supply only the short term and intermediate credit needs of the cultivators. Long-term credit can be provided with any degree of safety and success only

by the land mortgage banks. The growth and present condition of the cooperative movement will be discussed at length in a later chapter. Here it is sufficient to mention the reasons why the cooperative societies cannot finance the long-term credit requirements of the rural areas. The resources of these societies consisting of deposits and loans obtained for short periods are not suitable for financing long-term needs. Long-term loans can be given only on the security of land, the substitution of which for personal security may lead to the neglect of the cooperative principles. The valuation of the landed security and enquiry into its titles require a sound technical knowledge and the ordinary societies lack in such expert technical staff. Their assets will get frozen when the long-term debts are not paid on due dates. The land mortgage banks obtaining bulk of their resources by issuing long term debentures can adequately and safely supply long-term credit, either for the repayment of old debts or for permanent improvements. Moreover as pointed out by the Central Banking Committee cooperative finance suffers from inelasticity, dilatoriness and inadequacy owing to the selfishness or inefficiency of the managing committees.

Land mortgage banks which are either cooperative, quasi-cooperative or commercial or joint-stock, are a special type of credit institutions to supply long-term credit needs of the agriculturists. There are at present over 100 land mortgage banks in Madras; 12 in the Punjab with a working capital of Rs. 21 lakhs; 13 in Bombay; 12 in the Central Provinces, 5 each in Bengal, the United Provinces and Assam; and 2 in Burma. They are semi-cooperative organisations with limited liability consisting of agricultural borrowers and a few non-borrowers for efficient management. The working capital of these banks consists of deposits, shares, and debentures which have been issued either directly by them, or through provincial cooperative banks with a floating charge on mortgages of land, the interest of which is guaranteed by the government or a portion of which has been purchased by the government. In some provinces

there are provincial land mortgage banks to finance primary land mortgage banks by centralised debenture issues. Loans are given to members on the mortgage of land upto 50% of their value in some provinces, while in others the limit is upto thirty times the land revenue payable on them. Loans are granted after a thorough enquiry into the member's title in the land, his right to alienate, his repaying capacity, the need for the loan and after assessing the value of the land. The period of the loans varies from 16½ to 20 or 30 years in different provinces; and the interest charges are 8 or 9 per cent. The Agricultural Commission and the Banking Committees have suggested the starting of cooperative land mortgage banks of the German type to provide small agriculturists with long-term credit through mutual association and collective guarantee of their properties. They should be registered under the Cooperative Societies Act with certain safeguards, limitations and privileges into the details of which we need not go here. Then for supplying the needs of the large landowners and others they have suggested the development of land mortgage banks on the joint-stock principles as has been done in England, France, Ireland, Egypt and Japan.

Government : As a credit agency the Government provides financial assistance by granting loans to the cultivators under the Land Improvements loans Act 1883 and the Agriculturists Loans Act 1884. They are usually known as Takavi Loans. Government also assists the agriculturists in times of distress by remissions or suspensions of land revenue which benefit the landlords directly, but as they are conditional on remission or suspension of equivalent rent, they benefit the tenants also. Seed purchases from government depots also act like takavi when they are repayable in cash or kind. Under the Act of 1883, long term loans are granted for the permanent improvements on land, such as sinking of masonry wells or creating of embankments, and are repayable in instalments spread over a number of years, and are usually advanced on the security of landed property. Under the other Act of 1884, short term loans are granted for the

current agricultural needs such as buying of seed or cattle, manure or implements etc. and are repayable after the harvest. In normal years loans under this act are small, but in times of distress like famine or flood they are very large. The demand for long-term loans for permanent improvements is limited and the provincial governments have no well-planned policy of assisting agriculture by granting loans under these acts to promote agricultural improvements. They play, therefore, a very small part in agricultural financing. The loans given by all provincial governments each year hardly come upto between 35 to 60 lakhs under both the acts. The rate of interest is 6 to 6½ per cent and the loans under the act of 1833 are practically limited to 20 years although the maximum period allowed by the act is 35 years. In addition to the inadequacy, the method of distribution and collection are very defective and have given rise to many serious complaints. The illicit practices of the *patwari* and the *kanungo*, the undue rigidity and oppressiveness of collection, inelasticity of administration and difficulty of supervision, and the delay in dealing with applications drive many a cultivator to the rural money-lender who is always ready to lend. Moreover, the procedure to be followed and the facilities available are not well known to the farmers, and unlike cooperative credit these loans discourage thrift and self help and have no educative influence on the cultivator. Efforts should be made to remove these defects and to enlist the cooperative societies for the distribution and collection to a greater extent than is done at present. A Provincial Board of Economic Enquiry on the model of the Punjab Board of Economic Enquiry should be established in every province to collect, correlate and analyse all the economic factors affecting the rural areas and to submit the results of enquiries to the government rural welfare and development departments. The popular ministries have recently done very useful work in this direction. In recent times most of the provincial governments have given effect to the recommendations of the various committees and commissions in this behalf. As pointed out by the Famine Commission

of 1901 the Government as the greatest land-lord in the country should bear in mind while administering these acts, that its revenue depends on the prosperity of the cultivators and that the importance of these measures lies as much in protective as in productive aspects.

Commercial Banks : The joint stock banks including the Imperial Bank of India play a little part in financing agriculture directly, chiefly because they are not organised to supply rural long-term credit or short-term credit needs. We have already discussed in the earlier section the various reasons which preclude joint stock commercial banks from playing a useful part in this respect. The unsuitability of the agricultural security, the peculiarities of agricultural finance, the seasonal vicissitudes and uneconomic nature of the industry, illiteracy, and the imperative necessity of keeping their funds liquid prevent them from undertaking this kind of financing. A number of smaller banks, however, do lend to substantial cultivators and landlords to some extent on the pledge of ornaments, produce, or other valuables, and even on mortgages at the rate of 6 to 9 per cent. The Imperial Bank of India has recently begun to help big landlords in the Bombay presidency on personal security with two good sureties, or on the security of produce or gold at 6 or 7 per cent. The loss of credit by pledging stocks has made borrowers reluctant to avail themselves of these facilities, but this feeling is now dying out. In western countries the commercial banks have undertaken this kind of financing with necessary precautions. In England the 'Big Five' as recorded by the committee on Agricultural Credit in England (1923) had outstanding against farmers loans amounting to £46½ millions out of which £20 millions represented loans for the purchase of land and another £20 millions were normal loans for current trading. This has been possible on account of the highly developed branch banking which is lacking in our country. In Russia and United States of America also the commercial banks have played very useful part in this respect. The Central Banking Committee, therefore, recom-

mended that the commercial banks should lend liberally to the agriculturists on the security of gold, silver, and ornaments, as this would save them to some extent from the clutches of the money-lenders.

These banks also render some help to the cultivators through the cash credits and advances to the central and provincial cooperative banks. But these banks, especially the Imperial Bank of India, finance agriculture indirectly to a greater extent through merchants and dealers. But this indirect financing on account of the intermediaries is very dear. Generally this financing is done by making advances against the produce to approved buyers at 5 or 7 per cent in the movement of the produce to the consuming centres, and the movement from the collecting centres to the consuming centres is largely done by the purchase of the produce, despatched by approved buyers, and the movement is done by issuing drafts or telegraphic transfers. The Imperial Bank does all this at a rate of 7½ per cent based on the official bank rate. It also makes loans against gold ornaments.

The Reserve Bank of India was required by the Act instituting it to open an Agricultural Credit Department but so far it has not done anything except issuing statutory reports in which it has made a number of very important suggestions to improve and strengthen the organisation of the cooperative societies and the indigenous bankers so that an effective link between the villages and the organised money markets of the country may be established. It has been suggested that the commercial banks should discount more liberally agricultural paper and strengthen the existing provision for overdraft on the backing of approved promissory notes of Co-operative Central Banks and primary societies. They may also invest a limited portion of their funds in debentures of the Land Mortgage banks guaranteed by the government in respect of their capital and interest. To provide an adequate and cheap finance and to

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protect the farmers from the grip of the Mahajan it is very essential that these banks should play an active part in rural finance within limited safety.

The *Loan Offices in Bengal and the Nidhis and Chit Funds in Madras* occupy an intermediate position between the indigenous bankers and the commercial banks. The loan offices specialise in land mortgage banking and play a very important part in the rural life of the province. Their number at present is over 1000 with a capital of over 9 crores. They raise funds by deposits at rates of 4 to 8 per cent on short and long-term deposits respectively. They loan against ornaments, on mortgage of land and even on personal security for unproductive purposes, and never finance industry or trade.

The Nidhis and Chit Funds are mutual loan societies which raise funds by accepting deposits and issuing share capital. There are over 228 of them with a capital of over 2½ crores, and they promote savings, redeem old debts of members and relieve them from usury, and advance loans for all purposes on good security. They also lend to outsiders and the rate is 6½ per cent. A number of important recommendations have been made by the Banking Committees for improving the working and organisation of these associations.

A perusal of the existing facilities brings out clearly their utter inadequacy and the lack of coordination among the various agencies supplying credit to the rural areas. In a country where agriculture forms the mainstay of the population the necessity of an adequate and cheap credit organisation cannot be over emphasised. Both official and non-official agencies should try to serve the rural areas more adequately than do at present.

CHAPTER X

Rural Indebtedness

“The country is in the grip of the Mahajan. It is the bonds of debt that shackle agriculture.” *H. Wolff.*

The chronic and hopeless indebtedness of the peasantry in India is one of the burning problems and it has so far defied a solution. It is, as we have seen before, one of the most potent causes of the backwardness of our parent industry agriculture and it stultifies all talk of agricultural improvement. The Royal Agricultural Commission says “This is due not only to the fact that an important source of credit is drained for unproductive purposes and that the potential credit available for improvements is correspondingly curtailed, but also because it is found that, in case of usufructuary mortgages, the mortgagor too often declines to the position of a permanent tenant under the mortgage, paying, not a fair rent but the utmost the lender can extract or extort.”

The rural indebtedness in India is, however, no exceptional phenomenon, for wherever agriculture is pursued as the main occupation, there the inhabitants have from the very nature of circumstances, been compelled to borrow often to a very great extent in proportion to the value of the land. Farmers in every country have suffered from the want of capital. Another fact of universal application is that it has always been very difficult to obtain agricultural credit, because the individual credit in the case of the peasant is small and the banking credit has been confined to commerce and industry. We have already discussed in detail in the preceding chapter the peculiar circumstances of agricultural life in our country which make the peasant so peculiarly liable to indebtedness. These may be summarised here as the seasonal variations which render agriculture a relatively precarious occupation, the subdivision and fragmentation of holdings,

which render them uneconomic and the lack of suitable marketing facilities and the legal and customary obligations on the land, and the absence of suitable subsidiary industries to engage the agriculturist in his spare time to supplement his slender resources. These are the general causes of indebtedness which apply to all parts of the country.

Extent of indebtedness and its Increase: Prior to the report of the Banking Enquiry Committees in 1929-30 sporadic estimates of the rural indebtedness had been made. Sir Edward MacLagan estimated the total debt of the British Indian provinces at Rs. 300 crores in 1911; and Mr. Darling estimated it in 1921 at Rs. 600 crores. On the basis of the estimates of the Provincial Banking Committees the Central Banking Committee estimated the total agricultural debt of British India at the colossal figure of Rs. 900 crores. Since then it has increased considerably and is estimated at Rs. 1,200 crores by Prof. P. J. Thomas and even more than this by some other persons. In view of the recent world trade depression when the prices of the primary products fell by 50% the real burden of the debt has been doubled. Prof. Thomas thinks to be Rs. 2,200 crores, and if we compare the value of agricultural production in 1928-29 and in 1932-33 we find that it fell from 10,18,52 lakhs to 5,74,67 lakhs. As the Reserve Bank Report points out "Measured in commodities it must now be twice as large as a result of the fall in prices since 1929." This phenomenal fall in prices has made the payment of interest and the repayment of the principal rather difficult for the average cultivator who has been hard hit by it, and therefore, the debt has accumulated still further. There has been a good deal of social discontent feasible in recent times, and, coming in the wake of an unprecedented economic distress, it has caused a plethora of legislative measures in the various provinces to grant relief to the farmers and to protect them against unscrupulous creditors.

✓ It is clear from the foregoing estimates that the agricultural indebtedness has been on the increase. Indebtedness of the peas-

sant there had been in the past also, but it had increased appreciably during the nineteenth century with the rise in prices and land values. Before the British rule, the compact, communal, organisation of the village and its solidarity, stood in the way of debt accumulation and of the alienation of land. Custom limited compound interest to 50% for cash loans and to 100% for loans in grain; and the well-known principle of *Damdapat* curbed the exorbitant demand of the Mahajan. But during the nineteenth century land settlements enhanced the value of land and the credit of the landholders and the tenants; the establishment of the civil courts and the enactment of the civil procedure code and the enforcing of the individual rights in contracts led to the empowering of the creditors to attach the implements and cattle of the debtors; the Registration of Documents Act 1864 and the Transfer of Property Act 1882 increased mortgages in number and value; and the rise in prices due to the opening up of the country by railways after 1854 increased borrowings.

It is rather striking to note that the indebtedness of the peasantry inspite of great improvements in communication, irrigation, trade and the maintenance of peace and security, has rather increased than decreased, and it apparently seems paradoxical to speak that the peasants had become more prosperous prior to the recent depression than before. But as history warrants indebtedness and prosperity are not necessarily inconsistent. The only explanation of this phenomenon is that indebtedness still exists in rural India, not inspite of these improvements, but just because of them. With the maintenance of law and order as the base of economic development, the inauguration of land tenures and revenue systems, the improvements in communication, water supply and trade, the value of land as a security, in the face of growing demand for it, has immensely increased. In other words, it has led to the increased credit of the peasant, and hence, his temptation to borrow. He is in a far better position to borrow and assert his claim, and in the absence of any restraint in the form of education he has pledged

his credit to the fullest possible extent. As Mr. Datta says, "With increased wealth in the country there are now more persons with money to lend than before, and they compete with one another in offering loans to the cultivators at lower rates of interest. Owing to an increase in prices, land has considerably risen in value throughout India, and now forms ample security for a much larger loan in comparison with what it would have secured 25 years ago, and this increased credit the ryot is far too prone to utilise for foolish and improvident purposes." And as Mr. Wolff has said, "Credit is a good servant but a bad master." Once the peasant is in the cruel clutches of the usurious money-lender, who instead of being a friend, philosopher and guide to him, preys on him and trades in his necessities, he cannot hope to get out and the debt becomes hereditary. Thus it is, that thousands of cultivators in India are born in debt, live in debt, and die in debt. It is the unproductive nature of the debt which is more serious than its volume or rate of growth, because unproductive debts have an unlimited capacity to accumulate and increase automatically. Herein lies the tragedy of rural indebtedness. It has been found that about 70% of the debt in Bengal and Bombay has been incurred for unproductive purposes and the percentage in case of Madras is 60. For the whole of British India the percentage may safely be taken as 65.

Causes of Indebtedness:—The origin of indebtedness among the landed classes is traceable to various causes, among which the most important are the vagaries of the climatic conditions and the resulting insecurity of agriculture; failure of crops and loss of cattle due to droughts, floods, hailstorms, locusts etc., and famine and disease, general thriftlessness and improvidence necessitating huge expenditure on marriages and other domestic ceremonies; the use of sudden inflation of credit; the exactions of an oppressive body of middlemen; the loss of economic equilibrium in the distribution of occupations due to the destruction of the village arts and crafts industries and the consequent excessive pressure of population on the land; the small holdings and their

subdivision and fragmentation ; the extremely low standard of living, income and chronic poverty and the unsatisfactory system of rural finance. Inveterate illiteracy and ignorance put a premium on improvidence and extravagance although several provincial banking committees think that the picture of extravagance is overdrawn. The drain of wealth from the country for foreign domination hardly leaves any saving or surplus for future contingencies. The growing increase of the population without a corresponding increase in the outturn makes a debt hereditary, and ancestral debt, to the redemption of which a religious sentiment attaches, prevents many cultivators from starting their career with a clean slate. The law of limitation leading to renewals on usurious terms including compound interest adds fuel to the fire. Increased credit and material prosperity are other causes, if not for the origin of indebtedness, at least for its growth and constant increase. The facilities for borrowing owing to an influx of money-lenders have increased, and in the absence of any moral check the cultivator has pledged his landed security, the value of which has increased due to the causes we have discussed before, for obtaining more and more loans.

Among the other causes of indebtedness may be mentioned the unsuitable revenue settlements and demands for the payment of land revenue and exorbitant rates of interest and litigation. The usury and rapacity of the money-lender, which we have described at length in the last chapter, are among the very important causes of rural indebtedness. It is no wonder that not only the cultivator of the present generation is buried head and ears in debt, but he transfers this heavy loan to the succeeding generation. Thus, a cultivator starts his career against heavy odds ; he becomes a fatalist and reconciles himself to his lot. He ascribes his sad lot to an inexorable fate and destiny and the fire of ambition does not urge him to launch a revolt against his circumstances, social and economic.

Commenting on the smallness of his holdings and the climatic vicissitudes causing the insecurity of agriculture and the

consequent indebtedness of the peasant, Mr. M. L. Darling remarks that "to support a family upon a few acres without getting into debt requires a level of skill, industry, and thrift seldom attained in a hot country. Undoubtedly it can be done, just as a small sailing boat weathers a storm of the Atlantic; but unless the boat is both well found and well manned it will assuredly sink. In India the farm is too often neither the one nor the other, and nature can be almost as destructive on land as at sea."

Improvident borrowing is another primary cause of indebtedness. The method in which the peasant employs the loans from the money-lender is extremely unmethodical and baneful. He squanders this money in social ceremonies and ornaments, marriages, funeral rites etc. i. e., in unproductive consumption, and not in productive channels to improve his land and secure his income. The absence of thrift and self-help further aggravate his position. The limited nature of crops engaging only certain periods of the year, and abundant harvests have produced the habit of wasting long periods in idleness and encouraged thriftlessness. The Hindu joint family system is incompatible with any special disadvantages to the indolent and the incompetent who feed on the earnings of the more efficient and successful members. The series of seasonal feasts and religious observances, as well as caste dinners on auspicious occasions have stimulated family extravagance. All these have played an important part in fostering improvidence; while his belief in the doctrine of *karma* has reconciled him to his fate.

Then, the income of the cultivator is very small. It is so small as to make it impossible for him to have most of the necessities for efficiency and even some of the necessities of life and there has been no appreciable rise recently in his real income though money income has undoubtedly been greater than before. Two-thirds of the people usually get $\frac{1}{2}$ of the minimum requirements of food grains. They are under-fed, under-clad, and under-

nurtured, and the majority of them live from hand to mouth. The physical deficiency which results from these conditions makes him an easy prey to epidemic diseases, which sap his stamina and vitality and this enforced idleness and weakness compel him to borrow. It is true that in religion, in family affections and in friendship even the poor may find scope for many of the higher faculties, but the conditions which surround extreme poverty tend to deaden those faculties. In fact poverty is the curse and destruction of the poor. The heart-rending conditions, in which the poor helot of the soil is compelled to live on account of his chronic poverty, simply beggar description. A learned professor of an Indian University very cogently remarks "So we are here faced with the dismal reality of the low income of our Indian agriculturists followed closely by a very low standard of living, and this is the first serious disadvantage they are labouring under." ✓

To make matters worse, ignorance and illiteracy easily give vent to the multiplication of procreative processes and thus the population gets on increasing without a corresponding increase in the means of subsistence. The lack of spare land and the absence of alternative occupations to engage the surplus population aggravate the pressure of population on the soil. Agriculture is subject to the law of diminishing returns, and in the absence of manures and fertilisers to check constant soil exhaustion, improved seeds and methods of cultivation, the produce of the land goes on decreasing. The extreme poverty of the cultivator and the low yield of his tiny plots prevent him from providing against depreciation. Money economy and the higher prices ruling in the market tempt the peasant to dispose of all his produce without any reserve at a cheaper price and in a restricted market, and the poor fellow has to borrow to buy his food in times of need at a very high price. The untimely revenue demands and the constant harassing of the mahajan for payment of interest just at the time of the harvest, when alone the cultivator is in a position to pay, oblige the peasant to add fuel to the fire by

bringing his produce for sale to an already glutted or flooded market at the end of the harvests and spell his own disaster. The rural money-lender, as already pointed out combines trade, retail shop-keeping and even cultivation of land and the simple peasant falls into his clutches in many ways. He is sometimes compelled to perform free services or for a small allowance of coarse food to the mahajan. It is heart-rending to see the indigent and indebted peasant sell his movable property like jewellery and cattle or mortgage his land and house for the payment of the decree debts of the land-lords and mahajan or for the payment of Government dues and for escape from the loss of his izzat in civil imprisonment. The smallness of his loan, his irrepressibly urgent need for it and his utter inability to go elsewhere coupled with the nature of his security and precarious financial position, leave the peasant entirely at the mercy of the sabukar who finding him alone and helpless asserts his influence and control ruthlessly and unscrupulously to the best possible advantage to himself.

Then, the high rates of interest also compel the cultivator to borrow. The rates vary from one province to another but on account of the weakness of the peasant's economic position the interest accumulates everywhere. The rates vary from 9 to 12 per cent in Madras and Bombay on secured and from 18 to 24 per cent on unsecured loans; 25 to 50 per cent in Bihar, Orissa, Assam and Sind, and from 18 or 18½ to 37 or 57½ per cent in our Provinces. Not infrequently, however, the loans advanced are in kind either for food or for seed usually on sawai or deorba rates and if unfortunately, as usually happens, the crop fails to give the normal yield the peasant is face to face with starvation for he must satisfy the mahajan's claims in full as prearranged, or if he does not, the loan shall go on accumulating at compound interest and become hereditary. The interest in this case is usually 25% or 50% and even 100% sometimes.

*Effects :—*This chronic state of indebtedness has influenced the cultivators in many undesirable ways. Many of the evils

from which they suffer at present are attributable to indebtedness. The low standard of living and income and the indigence and poverty of the cultivating classes are due to it. The Central Banking Committee write that among the causes responsible for the low standard of living of the agriculturists and the continued impoverishment of this class, even in areas which are blessed with good seasons and normal crops, indebtedness must be given a high place. This low scale of income and poverty prevent an adequate application of capital in the cultivation of lands, tends to lower the physical and mental vitality of the cultivators, and causes the decay and weakening of the moral fibre of the society. All these lead to agricultural inefficiency, and indebtedness coming in the wake of these evils aggravates them. The defective system of rural finance in which the money-lender is both the creditor and the village trader leads to inordinately and unprofitable marketing. The indebtedness of the peasant to the money-lender compels him to sell his produce at a pre-arranged price and in a closed and isolated market lacking in competition. The only remedy to avoid it is the growth of cooperation both for the supply of credit and marketing. Even the unsatisfactory system of rural finance in which no distinction is drawn between short and long term loans is attributable to indebtedness. When large sums of money are borrowed for capital improvements or for the payment of old debts the period of repayment fixed in the bonds is not very long. It is only three years in the Central Provinces. The result is that the income of the cultivator is utilised more for the payment of the debts than is desirable or possible and the cultivator is left with very meagre income even for his subsistence. This leads to unproductive methods of cultivation and is very detrimental to the growth of national wealth. Any machinery to provide long term loans for the liquidation of old debts by instalments at low rates of interest would save the cultivator from incurring heavy debts which prevent him from using improved methods and would reduce by providing competition the rate of interests on the short term loans also.

Then, indebtedness causes a loss of property and transfers land from cultivators to non-cultivators which is fraught with grave economic and social consequences for the future of the country. The areas held by non-agriculturists have shown an increase in recent years. The Marwaris, the Vaishyas and other money-lending and trading communities have been steadily ousting the cultivators from their fields. This has led to increased tenancy in recent years and to rack-renting and sub-letting. Between 1921-31, the number of labourers per 1000 cultivators has increased from 291 to 407. Such a tendency impedes agricultural progress and breeds inefficiency. It increases the number of landless farmers. The creation of a landless proletariat brings disharmony in the social structure and provides a highly inflammable material. The growing agrarian discontent so feasible in recent years is a portent of the coming storm of social discontent and unrest which, if not checked in time, will cause a revolution upsetting the existing social order. Moreover, this is very detrimental to agricultural progress and efficiency. The reduction in the economic status of the peasant which results from the transfer of his land to the money-lender causes inefficiency because the money-lender sublets the land at a rent which hardly leaves sufficient profit to the cultivator to induce him to raise a good crop. As a consequence of this inefficiency the cultivator is not able to get enough money to cultivate the field properly and to increase first class crops. In the Punjab, the Central Provinces and in Bundelkhand restrictions have been placed on the alienation of land from the cultivators to non-cultivators by law. The United Provinces Banking Committee did not favour the extension of the Bundelkhand Land Alienation Act to the whole or any other part of the province and stressed the need for a fuller and further inquiry. The evil of land alienation from cultivators to non-agriculturists is the most pronounced in Bengal. In Madras and the Punjab especially a number of agriculturists have become money-lenders, and as the land has passed to them, there is nothing to deplore so far

as agricultural efficiency is concerned. But the displacement of many cultivators from the possession of their land is fraught with grave consequences.

Finally, indebtedness has caused economic servitude of the cultivators. This is evidenced by the Kamiauti agreements of Bihar and Orissa and the Pannaiyal system of Madras. These resemble the indenture system of coolies or labour in which for the passage money and food and clothes the coolies are required to serve their masters for a term of three to five years. Under the Kamiauti agreements of Bihar and Orissa and the neighbouring districts of eastern United Provinces, the debtors specially of the low castes like the Dusadhs, Chamars, Bhars etc. borrow money usually for the marriage of their sons or daughters, and occasionally for themselves, and undertake to repay or perform labour on the farms and in the houses of the money-lenders until the debts are cleared, and after their deaths their sons are bound by the same agreements to serve. In this way the debt goes on accumulating from generation to generation, and the poor debtors are not allowed to serve any-body so long as work on the money-lender's farm is necessary. In return for these services they get a customary allowance of a few pices per day, coarse food, old clothes, and now and then new clothes, and rewards on auspicious occasions. Their wives and children are required also to serve the money-lender for a pittance. Since 1920 however, such agreements have been declared null and void in Bihar and Orissa. In the Madras presidency the Pannaiyal system is practically similar to the Kamiauti agreements. Some thing like these systems also prevails in the Central Provinces. Such instances, however, are now reported to be rare, and for the services performed to the money-lender, they are now paid.

Remedial measures :—Such is the problem of rural indebtedness and usury, and several and varied have been the attempts made by the government to mitigate these evils ; but it cannot be said that they have met with any considerable degree of success.

At first it was thought that the mere enlargement of the means of credit would solve the problem, but now it is recognised on all hands, that the best method of relieving this cardinal defect of Indian husbandry is to educate the people and inculcate in them the habit of thrift, self-help and moral control simultaneously with the enlargement of credit facilities. The reason for this belief lies in the fact that if credit is dear it ruins the cultivator, if it is cheap and easy, the cultivator ruins himself by over-borrowing. The more money he can command, the greater will be his expenditure on customary obligations. As Fergusson puts it, "To a people in the state of civilisation to which India has reached, a secure title to a fixed income only means the power of borrowing on the occasion of a marriage, a funeral, or some great family festival more than the borrower can ever pay."

Rural indebtedness falls in two broad categories: the current debt taken with the intention of repaying after the harvest, and the old and long-standing or ancestral debt. So far as the former is concerned the usurious high rates of interest and the other economic causes accompanying the pursuit of agriculture in the country prevent the repayment of the current debt and this also accumulates. The impeccable habits of the rural borrower are to be kept in view while suggesting remedies for its solution. A real solution of this part of the rural indebtedness lies in the extension and strengthening of the cooperative movement not only for the supply of credit but for other purposes also, and the restriction of usury both by propaganda and legislation. Legislation or governmental action will prove ineffective, as it has done in the past, unless the cultivator is taught to use credit properly. For this purpose, education and a regular intensive and extensive propaganda through the pulpit, the press and the platform should be carried on. The village *panchayats* should be revived and strengthened to control and regulate the practice of usury by the rural money-lender and to curb unproductive borrowing by the cultivator through social pressure. Speculative money-lending should also be checked. The provision for the

repayment of the loan should also be made. It is very essential if the cultivator is to be saved from being burdened with the accumulation of the interest and the debt. To increase the repaying capacity all efforts to increase the yield of crops and to improve the marketing facilities should be made. To reform the impecunious habits of the borrower and to reorganise the system of rural credit and finance, education must be kept in the forefront of the programme of redemption of indebtedness. It is a happy augury that a very powerful drive against illiteracy has been recently launched by the popular ministries in the various provinces. Night and adult schools opened by non-official agency and by students in their spare time will go a long way in solving this problem. Then, credit should be linked with agricultural improvement and marketing, and the best solution of this coordination lies in the development of multilateral cooperative societies. There should be a coordination and cooperation in the departments of Cooperation, Agriculture and General administration to improve the lot of the cultivators. The recent rural reconstruction and uplift programme of the Congress ministries was a very long awaited move in the desired direction but it is lamentable that on account of a political stalemate there is a constitutional crisis at present and this beneficent activity has been checked. Let us hope that it will be only a temporary phase. If those, and other suggestions which we have made elsewhere to improve Indian agriculture are carried out, we are confident, the problem of short-term indebtedness will be solved.

In addition to the provision of the cooperative societies to provide cheap and guarded credit, the government has also been distributing *takavi* loans since the eighties of the last century under the Land Improvements Loans Act for long term credit and under the Agriculturists Loans Act for short term credit. This granting of *takavi* and other loans in abnormal times by the government is a long established practice. It has been the practice of the rulers in the past to advance loans in times of

should be made to establish them in as large numbers as possible in such localities in which favourable conditions exist for their starting. But the co-operative movement comprises only a small section of the vast agricultural population, and therefore, to provide for the larger section which lies outside the ambit of the cooperative organisation at present, and to grant loans to big landlords provincial land mortgage corporations on a joint stock basis or on the model of the English Land Mortgage Corporation should be established. Land mortgage banks can be utilised for the redemption of standing debts only by such cultivators as have land security, surplus income to pay off the debt in instalments, and who do not have to go to the money-lender again for finance and for the redemption of their debts. The number of such cultivators is very small. Therefore a very substantial number of cultivators cannot avail themselves of these facilities, and hence, there is a progressive and serious deterioration in their position. To ignore this, and not to do anything to relieve it, is, as the Agricultural Commission say, the worst policy towards debt. The C. Banking Committee thought it incumbent on the government to devise means to tackle this problem and for this they recommended the method of conciliation between the debtors and the creditors for composing the debts. But a mere composition and moratorium through voluntary conciliation will only help to postpone the debt and relieve the debtor only temporarily. A provision for repayment is more essential. Government can repay by compounding the debt; through redemption of the whole of it, or by floating long-dated, interest bearing, marketable bonds guaranteed by them. This is, however, suitable only for smaller states like Bhavnagar and unsuitable for provincial governments.

The Central Banking Committee realised it when they wrote that any scheme of debt conciliation could not succeed until adequate organisation for carrying out debt clearance has been built up, and unless some agency like the Government, or the co-operative credit societies or land mortgage banks where

they exist, is forthcoming to make cash advance to the debtors in order to enable them to pay the compounded debt, at least in part, to the creditor. Some of the Provincial Committees thought that the money-lender would be willing to accept in full satisfaction of his claims considerably less sums if paid down in cash. With a view to improve the economic prosperity of the country and to stem the tide of agrarian discontent, the Central Committee suggested that a serious effort should be made to find a remedy for the chronic indebtedness of the agriculturist, so far as it relates to his unproductive debt. In their opinion the most effective remedy would be found in the pursuit by the local governments of a vigorous policy of debt conciliation on a voluntary basis. They commended to them the following scheme:—

Special officers should be appointed in each province whose function would be by propaganda to persuade the lender and the borrower to agree to a redemption of standing debt on the basis of a cash payment or equated payments spread over a number of years. These officers would advise the agriculturist debtors of the existing facilities for lightening the burden of indebtedness; and to help them Conciliation Boards should be appointed if necessary. The existing cooperative credit societies should be utilised as the agency for the payment of the settled amounts to the lender by the borrower, who should become a member of the co-operative society so that the society may provide finance for his current needs in future. The outstanding part of the settled debt will be treated by the lender as a deposit with the co-operative society which will refund it to him by settled annual instalments. Where the lender wants a cash payment, the Government should advance to the co-operative society the necessary funds to be repaid by the society to the government in annual instalments. Government should have a regular programme of advances to co-operative societies for debt redemption, and should help them in times of losses not due to any negligence or mismanagement on their part. If necessary, the

whole arrangement should be backed by a legislative enactment. In cases where the lender will not agree to a voluntary settlement of the debt, compulsory settlement should be secured by legislative enactment.

Viewing the problem of the redemption of the ancestral debt, from the point of view of debtors who were prepared to give up all their debts in discharge of the inherited debt, the Agricultural Commission had recommended the consideration in every province of a simple Rural Insolvency Act. The Central Banking Committee also agreed with this recommendation, and suggested the provincial governments to explore the possibility of passing other legislation to secure the settlement of debts on a compulsory basis.

Recent Debt Legislation and Conciliation : The unprecedented economic blizzard which swept across the world in 1929-31 caused a heavy slump in prices. We have seen in an earlier section how the prices of primary produce fell by 50% and increased the severity of rural indebtedness and its incidence. Hence, the depression and post-depression period has witnessed a large number of legislative measures enacted to give effect to the recommendations of the Banking Committees to relieve the farmer-debtor classes. We have already discussed in the last chapter how, to protect the ryot against the extortion and oppression of money-lenders, important amendments and alterations have been made in the Civil Procedure Code, and in the Contract Act, 1899. The most important of these are the freedom of tools, implements, cattle for tillage, and materials of the household from attachments; the immunity of the ryot from arrest, and payment by instalments. Then the provisions of the Usurious Loans Act of 1918 have been extended to several provinces and suitable amendments have been made in them to suit the local conditions of every province. We have also described at length the legislation passed in the various provinces to control money-lending by registration and licensing for keeping regular accounts and limiting the rates of interest

eto. Then the well-known principle of Damdupat has been adopted in the various provinces. We have also mentioned in the last chapter the various Acts passed in the different provinces or bills contemplated for granting relief and protection to the agriculturist debtors. Other important measures and enactments are as follows:

Punjab : Relief of Indebtedness Act 1934, modelled on the Debt Conciliation Act of the C. P. and Debt Legislation Acts of the U. P.; and the *Debtors' Protection Act 1936*. If the rate of interest exceeds 12% simple and 9% compound with annual rests on secured loans and 16 $\frac{3}{4}$ % simple and 14% compound with annual rests on unsecured loans, it is deemed excessive. Conciliation Boards are empowered to settle debts under Rs. 10,000, and no appeal lies against the orders of the Boards. The principle of Damdupat is also applied.

Central Provinces :—The Debt Conciliation Act of 1933 envisaging the creation of Debt Conciliation Boards for the settlement of debts between debtors and creditors and providing for repayment of the collection of instalments through the revenue agency; the *Reduction of Interest Act 1936* protecting landholders and tenants paying revenue or rent not exceeding Rs. 5,000 by reducing rates of interest and by limiting their credit in order to stop their taking unproductive loans; and the *Protection of Debtors Act 1937* which aims at protecting debtors against molestation and harassment. The *Relief of Indebtedness Bill 1938* aims at compulsory scaling down of debts. It suggests many important changes in the existing machinery of debt conciliation.

United Provinces : Agriculturists' Relief Act 1934 grants relief to 'agriculturists' in the shape of payment by instalments, reduction in rates of interest both existing and future, and these benefits apply to non-agricultural land. *Encumbered Estates Act of 1934* as amended by the Act of 1935 benefits landholders whose immovable properties are encumbered with debts. *Regulation of Sales Act 1934* regulates the sale of

agricultural land only in execution of decrees of civil court and puts the parties in relation to the land values in the same position in which they were at the time of accepting loans. *Temporary Regulation of Execution Act 1934* applies to small agriculturists in the decrees upto Rs. 1,000 and provides that on the deposit of 25% of the decretal amount for payment to the decree-holder the judgment debtor may pay only 40 or 50% more in full discharge of his debt, so that after five annual instalments are paid, the debt is wiped out. The *Usurious Loans Act of 1918*, as amended by the Act of 1934, prevents a money-lender from obtaining a decree passed on a rate of interest higher than 12% and 24% per annum in case of secured and unsecured loans. The *Agriculturists' Loans Amendment Act of 1934*, under which Government lends money to the agriculturists for the payment of existing debts and recovers the amounts in instalments spread over a long period. Besides these Acts three important bills were introduced in 1939 and these are the *U. P. Money-lenders' Bill*, the *United Provinces Agriculturists and Workmen Debt Redemption Bill*, and the *Agricultural Credit Regulation Bill*. Seeing that the Acts of 1935 passed for the liquidation of agricultural debt have failed to reduce it to a level which would enable any measures to place agricultural credit on a sound basis to be effective, the second bill proposes to reduce effectively agricultural debt. It applies to loans incurred before the 1st of January, 1938 only, and to proprietors paying not more than Rs. 500 as land revenue and to tenants paying not more than Rs. 500 rent and to persons earning Rs. 60 as wages per month. It does not apply to proprietors who pay income-tax. The debt is reduced by the low rates of interest (5% simple on secured and 8% simple on unsecured debts) in cases where the contractual rate is greater than these rates. The provisions of the bill reducing debt except the provision making the law of *damdupat* applicable to paid interest apply also to tenants and proprietors paying not more than Rs. 1,000 as rent or as land revenue. This bill, however, deals with existing debts only. To deal with debts

that may be contracted on or after the 12th of April, 1939, the Regulation of Agricultural Credit Bill 1939, has been introduced. The main object of this bill is to limit the amount of debts which an agriculturist can borrow to an amount which he can pay without undue hardship. To achieve this object, it provides that no decree can be executed against agricultural produce after four years have expired from the date of the passing of the decree and that not more than one-quarter of an agriculturists' crops can be attached at any one time in satisfaction of any decree or any number of decrees. In the case of proprietors, with a view to restrict over borrowing and over-lending it provides that the land of a proprietor who does not pay more than 250 rupees land revenue cannot be sold in execution of a decree for debt unless the judgment debtor has other means of livelihood, and cannot be permanently alienated except with the sanction of the Collector. The land of a proprietor who pays more than 250 rupees as land revenue cannot be protected under the bill unless he applies for the same to the Collector in respect of such land only on which he pays 250 rupees land revenue. Thus, the creditor can only obtain a self-liquidating usufructuary mortgage for twenty years, after which the land reverts to the judgment debtor without any payment by him. Both these bills provide for the repeal of the Agriculturists' Relief Act 1934 and the Temporary Postponement of Execution of Decrees Act 1937.

Madras : The *Debtors' Protection Act 1935* applies only to loans under 100 rupees at a time and grants relief in interest if the rate exceeds 9% simple on secured loans and 15% on unsecured loans and empowers the courts to examine transactions on the presumption that the rate is exorbitant. The *Cooperative Land Mortgage Bank Act 1934* empowers the provincial government to guarantee the principal and interest on the debentures issued by the Central Land Mortgage Bank and has made provisions for the improved working of the primary banks. The *Agriculturists' Loans Act of 1935*, worked through special revenue officers, grants loans to agriculturists to

discharge their old debts at 5% interest and for periods of 25 years, and to a maximum amount of Rs. 2,000 only. The *Debt Conciliation Act of 1936* gives relief to landholders or occupaney ryots whose debts exceed Rs. 100 through voluntary conciliation. The *Agriculturists' Relief Act of 1938* is the most important and radical piece of debt legislation and came as an aftermath of the Moratorium Bill of the previous year. It applies to agricultural classes of various descriptions and is designed to rehabilitate agriculture by relieving the primary producers from the crushing burden of indebtedness. Landholders who pay a *peishkush* of over Rs. 500 and Inamdars who pay a quit rent of over Rs. 100 are excluded from the benefits of this Act and cooperative societies, and land mortgage banks etc. are free from the operation of the Act. It provides for the compulsory scaling down of debts, distinguishes between depression and post-depression debts and offers relief to all ryots. All arrears of interest outstanding on October, 1, 1937 on loans prior to 1932 (October,) are wiped off. The principal alone is payable. All debts after that date are to carry only 5% interest upto October, 31, 1937. It has also enforced the rule of *damdupat* and has allowed the payment of the balance if the payments already made fall short of twice the amount of the loan. It has prescribed a maximum legal rate of interest subject to revision by the government at $6\frac{1}{4}\%$ on all future debts after the commencement of the Act and on the debts so scaled down. Its provisions have also been applied to decreed debts, and relief to tenants has also been given by wiping out all arrears of rent except of the two preceding years, provided they are paid by September 1939. Similar relief has been granted to tenants in U. P. as well. Sales of movable or immovable property of agriculturists can be set aside if such sales are in execution of a decree after 1st October, 1937. Upto August, 1938, 36,000 applications involving Rs. 76 lakhs of debts had been disposed of in which the debts had been scaled down to Rs. 40 lakhs or by 47%.

Bengal :—The *Agricultural Debtors' Act 1935* inaugurated Conciliation Boards and endowed them with powers for compulsion in the event of the voluntary methods failing to settle the debts. It also provides for a simple insolvency procedure on the lines recommended by the Agricultural Commission. *Assam* passed the *Debt Conciliation Act in 1936*; *Bombay* has introduced the *Agricultural Debtors' Relief Bill in 1939* and similar legislation has been contemplated in *Bihar* also. The chief object of the *Bombay Bill* is to relieve indebtedness by lightening the past debts and preventing future ones and to regularise what advances must be made to farmers to maintain "a sound, cyclical, rural economy." Compulsory scaling down of debts as arranged by Debt Adjustment Boards working under the civil courts ; not more than 6% interest on debts incurred prior to January 1939, and not more than 9% on subsequent debts, and relief to cultivators only in secured debts between Rs. 100 and Rs. 5,000 and declaration by the Board of a debtor whose assets are not sufficient for the payment of the scaled down debts as an insolvent etc. are some of the important provisions of this bill. Among the native states, *Bhavnagar*, *Mysore* and *Travancore* stand out most prominently for adopting measures to establish conciliation boards for the settlement of debts.

A scanning of the various measures to conciliate and scale down debts brings out clearly that there are two methods of conciliation and settlement of debts. One is voluntary and is based on mutual agreement between debtors and creditors through the Conciliation Boards, consisting of officials and non-officials and representatives of both debtors and creditors. This method has been followed in the *C. P. Debt Conciliation Act 1933*, the *Punjab Relief of Indebtedness Act 1934*, the *Bengal Agricultural Debtors' Act 1935*, and the *Madras and Assam Debt Conciliation Acts of 1936*. The second method is compulsion which has been resorted to because the voluntary method is rather dilatory. This has been adopted in the *Madras Agriculturists' Relief Act 1938*, the *C. P. Relief of Indebtedness Bill 1938*, the *Bombay Agricultu-*

ral Debtors Relief Bill 1939 and the U. P. Agriculturists and Workmen Debt Redemption Bill 1939.

The Debt Conciliation Boards are empowered to settle debts of not more than Rs. 25,000 in C.P., of not more than Rs. 10,000 in the Punjab, and of not more than Rs. 25,000 in Madras. If a certain percentage of the debts (40% in C.P.) is settled by mutual agreement, then the latter is signed by the Board and is registered to have effect like the decrees of a civil court. The settled debt is then paid in easy instalments spread over a number of years according to the paying capacity of the debtor; and the rule of *damdupat* is generally observed. Certificates are issued to the debtors of refractory creditors who are debarred from obtaining costs in suits for the recovery of such debts and from getting more than 6% simple interest on the amount due from the date of such certificates. The decisions of the Boards are final and no appeal is allowed against them in civil courts except in the case of Bengal. Greatest success has been achieved by these Boards in the Central Provinces. Some fifty Boards had been established which between them considered 46,537 cases involving Rs. 5.63 crores of debts and these were scaled down to Rs. 2.93 crores till June 1937. This means that the debts were reduced by 48%. There are five Boards working in the Punjab, and two in Assam. In Bengal and Madras the work has not been very satisfactory on account of inordinate delays. But for the repayment of conciliated debts sufficient provision has not been made by starting land mortgage banks except in the Central Provinces and Madras. We have already emphasised before that the establishment of these banks is imperatively necessary if the incubus of rural indebtedness is to go away.

Finally, mention may be made of the restrictions on alienation of land which have been imposed in the Punjab and in the Bundelkhand division of U. P. The Punjab Land Alienation Act 1901 has been suitably amended in 1938 and the Punjab Restitution of Mortgaged Lands Act 1938 empowers a mortgagor to apply to the Collector for the restitution of possession of land mortgaged

prior to June 8, 1901, subject to certain conditions. We have already described recent debt legislation in the various provinces for the protection of the borrower and the exemption of his property, part of the holding etc. from attachment and sale and restriction of usufructuary mortgages to a certain number of years. The U. P. Regulation of Agricultural Credit Bill 1939 as we have seen earlier also makes suitable provision in this behalf.

In spite of these measures adopted by the various provincial and state governments to wipe out the incubus of rural indebtedness and to free the producers of food and raw materials of industry from its crushing burden, the problem of rural indebtedness remains still unsolved. The voluntary and compulsory scaling and cutting down of the debts merely aims at curing the existing acute malady of indebtedness, but it does not prevent the contracting of future debts. The Reserve Bank Report on Agricultural Credit has emphasised the dual aspects of this problem viz., reducing and restricting credit and increasing the earning and consuming powers of the teeming millions by adopting beneficial measures for the all-round betterment of the rural conditions. A true and lasting solution of the problem of rural indebtedness lies in the provision of alternative occupations, education, cooperation and agricultural improvements of all kinds. More land mortgage banks in all provinces should be established with government guarantee of their debenture bonds and Rural Insolvency Acts should be passed after a full inquiry into the local conditions of the areas concerned. The debt conciliation and settlement programme should be pushed on more vigorously throughout the country. The village Panchayats should be revived for this purpose and the services of cooperative societies should be requisitioned. To provide for those who are dispossessed of their land through conciliation, land clearance and colonisation programme should be adopted as has been done in Italy and other countries. This will not only relieve the existing thickly populated villages of congestion but will also provide land for the surplus population, relieve those in debt and increase the purchasing power and productive capacity of the country.

CHAPTER XI

CO-OPERATION

The development of an improved agricultural practice is intimately bound up with its economic aspect, the provision of capital. Capital, then, is the crux of the whole problem of agricultural improvement. It is the provision of cheap and sufficient amount of credit on which hinges the improvement of the Indian agriculture. We have already noticed in a previous chapter the necessity of cheap and adequate credit facilities, and the discussion of the various lines of development suggested, has also driven us to the inevitable conclusion that the hopelessly chronic indebtedness of the peasantry combined with acute poverty, ignorance, illiteracy and a low standard of living is a standing stumbling block in the path of progress and stultifies all talk of improvements. This is clearly the fundamental weakness of the cultivator's position; and, when and when alone, this weakness is removed, will the farmer be in a position to adopt more improved or scientific methods of farming. We have also seen that on account of various difficulties the joint stock banks cannot provide this credit and the meagre income and saving of the cultivator and his illiteracy make the Post Office Savings Banks useless to him. In the last resort, therefore, he is driven to borrow from the village sahukar who is notorious for his rapacity and usury and illicit practices. The conditions which exist in the villages, then, are such that, at the worst, admit of the development of usury, and, at the best, render the cost of capital too high to let it be used for improvements in any way. For agricultural development a more general employment of capital is necessary, and this will be obtained only by cheapening the rate of interest to let the cultivator have a liberal balance of the profits from improvement for his use as a compensation for his extra labour.

Co-operation may be defined as the voluntary association of weak and isolated individuals for mutual common economic benefits, which lays emphasis on the moral and educative aspect, and aims at the development of the man himself. The co-operative credit societies "lay emphasis on the moral factor by making people responsible for each others' obligations and prevent that loss of self-respect which follows from accepting free grants of money. In India, as elsewhere, this combination of material help with moral control is briefly the message of the co-operative credit movement." Credit is serviceable only so long as it is kept under control. As one writer puts it, "Free, unrestricted credit to agriculturists in isolation is a positive danger. Credit in association, guided and influenced in its use by the wiser counsels, by the increased self respect and self-restraint which association produces, is a powerful restorative, an educative and a disciplinary agent, a national necessity." And it is especially so in our poor country of peasants and artisans.

History:—As early as 1884 the Governor-General-in-Council in a despatch to the Secretary of State pointed out the sore need of credit to the cultivators and hinted at the establishment of some such organisation as would grant loans to the solvent agriculturists on easy terms. Sir W. Wedderburn's proposal to establish a land bank in Poona failed of materialising owing to the apathy of the Secretary of State. Sir Frederick Nicholson, deputed by the Madras Government in 1892 to investigate into the question of rural indebtedness and report emphasised the need for co operative land banks. His conclusions may be summed up in the two words "Find Raiffeisin". Meanwhile the severe famine in 1899-1900 led to the appointment of the Famine Commission in 1901 which discussed at length the problem of credit and recommended very strongly "The establishment of mutual credit associations". The question of starting co-operative credit societies was taken up first by the Madras Government where the Nidhis afforded a precedent for their establishment. There were in 1901 over 200 Nidhis with 36,000 members and a

subscribed capital of £1,700,000. Small beginnings had also been made in the Punjab and in Bengal. Before any legislation was undertaken by the Government for introducing co-operative credit societies, Sir Anthony Macdonnell did pioneering work by establishing in 1901, 200 co-operative credit societies in the United Provinces. At the same time the Government of India impressed with the importance of and the future possibilities for, the co-operative movement, and encouraged by the recommendations of the Famine Commission appointed a Committee with Sir Edward Law at its head to investigate the question and a report was submitted to Government recommending that co-operative societies were worthy of every encouragement and of a prolonged trial. The draft bill was referred to the local Governments for criticism, and on the consideration of their replies, Lord Curzon's Government introduced in the Supreme Legislative Council a Bill to provide for the constitution and control of cooperative credit societies on October 23, 1903. The chief objects of the Bill were (1) to take such societies out of the scope of general law and substitute provisions especially adopted to their constitution and objects, (2) to confer upon them special privileges and facilities so as to encourage their formation and assist their operation; and (3) to take precautions against the improper utilisation by speculators and capitalists of privileges not intended for them. The Bill when passed became the *Co-operative Credit Societies Act 1904*.

The main provisions of the Act of 1904 were: (1) Any ten persons living in the same village or town or belonging to the same class or caste might be registered as a co-operative society for the encouragement of thrift and self-help among the members. (2) The main business of a society was to raise funds by deposits from members and loans from non-members, government and other co-operative societies, and to distribute the money thus obtained in loans to members, or with the special permission of the Registrar, to other co-operative credit societies. (3) The organisation and control of credit co-operative

societies were put under the charge of a special Government officer called the Registrar of Co-operative Credit Societies. (4) The accounts of every society were to be audited by the Registrar or by a member of his staff free of charge. (5) The liability of member of a rural society was to be unlimited. (6) No dividends were to be paid on the profits of a rural society, but the profits were to be carried at the end of the year to the Reserve Fund, although when this fund had grown beyond certain limits fixed under the bye-laws, a bonus might be distributed to the members. (7) In Urban Societies no dividend was payable until one-fourth of the profits in a year were carried to the Reserve Fund.

The precise object of these societies was defined by Sir Denzil Ibbetson to be the encouragement of individual thrift, and of mutual co-operation among the members, with a view to the utilisation of their combined credit, by the aid of their intimate knowledge of one another's needs and capacities, and of the pressure of local public opinion. In other words, the object was to encourage thrift, self-help and co-operation among agriculturists, artisans and persons of limited means. For this purpose the societies were classified into two parts: rural and urban. Only members of the societies were entitled to borrow because this ensured mutual confidence and co-operation which is the *sine qua non* of the co-operative credit movement. No money was to be lent on mortgage so that capital should be liquid and easily realisable; interest of every member in the society was limited to bar him from obtaining a controlling power and shares were made transferable subject to certain conditions to prevent speculation. A simple form of registration was provided as well as compulsory dissolution subject to appeal to the Local Government in order to meet fraudulent cases, or bogus co-operative societies and for liquidation under a simple procedure, and subject to appeal to the Civil Courts.

In case of rural society the liability of every member was unlimited, no profits were to be divided, but were to be earmarked

as a reserve fund to provide further capital or to be applied to relieving the rate of interest upon loans. Loans were to be given only on the personal security of the borrowing member, though agricultural produce might be taken as security or in payment, for the society as such will be able to get a better price than an indebted cultivator would obtain. In case of urban societies liability was limited; profits were divisible subject to the provision of a sufficient reserve fund. They were allowed to lend to a local rural society as well. To encourage thrift and stability to the operations of the society, the shares or other interest of a member in the society were exempted from their liability to private debts; and certain other substantial privileges with regard to registration, stamp, income tax etc. were granted.

As regards membership it was provided that in rural societies 4/5ths of the members must be agriculturists while, in urban societies, non-agriculturists. Compulsory inspection and audit by the Registrar in every province was also provided.

These were in brief the provisions of the Act of 1904. Mr. (now Sir) Adamson cherished the future of these societies in the following words: "Our co-operative credit society is but a frail barque launched upon a treacherous ocean, but if it can escape from being wrecked by the opposition of the money-lender, if it can avoid being stranded on the shoals of mutual distrust among its members, if it can carry safe to port a portion of its cargo of self-help and co-operation, it will some day rank as the most important bill ever passed by the Government for the betterment of the Indian agriculturists."

The Act of 1912:— The noble hope cherished by Sir Adamson materialised, and within two years of the passing of Lord Curzon's epoch-making measure of 1904, 800 societies had sprung into existence. The number increased steadily and before long the faultiness and inadequacy of this experimental measure were found out. The Act of 1904 had limited co-operation to credit supply only; but the experience of the 7 or 8 years of working showed that much progress could not be made

in the supply of credit under it to the rural areas. The working capital of the entire movement upto 1912 was only Rs. 75 lakhs. The need for a free supply of capital had led to the formation of various central agencies to finance and control the individual societies, but the Act did not formally recognise joint or central societies formed of other societies. Secondly, the distinction between rural and urban societies was unnecessary and unscientific. Thirdly, there was no provision for any form of co-operation other than co-operative credit. Fourthly, it was a great hardship to the rural unlimited liability societies not to divide the profits specially in Madras and the Punjab.

To remedy these and other minor administrative defects a new Act was passed in 1912 making provision for the expansion of the movement, and authorised the registration of co-operative associations for purposes other than credit, removed the former arbitrary classification of societies between urban and rural, and substituted for it a scientific distinction based on the nature of liability adopted, and finally, it legalised registration of unions, central banking unions and central banks. Provision was also made for the registration of societies for various purposes aiming at the economic emancipation of the masses e. g. sale and purchase, insurance, and other societies. In Madras, Punjab and Burma permission was given to declare dividends on shares in unlimited societies subject to special permission of the Provincial Governments. All societies were allowed to set apart not more than 10% of their profits for education and charitable purposes after $\frac{1}{2}$ has been reserved. It was also provided that the liability of a society of which a member is a registered society shall be limited, while that of a society of which the object is the provision of credit to its members and of which the majority of members are cultivators shall be unlimited, and that in all other cases it shall be optional.

With the passing of the Act of 1912 the co-operative movement in India entered upon the second stage of its development. The new Act infused a fresh energy into the movement. Several

new societies for the sale of produce, cattle insurance, milk supply, yarn, silk and manure purchase, and the retail of farm implements and common necessities, had been registered and prospered. The number of credit societies ever since had multiplied rapidly and the confidence of the public won over.

The Imperial Committee on Co-operation (1914-15) :— In order to enquire into the soundness, economy and finance of the movement, and to take further steps, the Government of India appointed on 8th October 1914 an Imperial Committee with Sir Edward Maclagan as president and containing official and non-official members. The Report of the Committee was submitted in 1915 and was confined mainly to a consideration of agricultural credit societies. *With the publication of this classic report the co-operative movement entered on the third stage of its development.* After examining the movement in all its aspects the Committee made a number of very far-reaching and important suggestions for its improvement and extension.

The searching and sifting inquiries by the Committee brought to light a number of very glaring defects which hampered the movement in its development. The chief obstacles in the way of rural co-operation pointed out by the Committee are as follows :—

1. *Illiteracy :—*The ignorance and illiteracy of the mass of the rural population creates a number of very serious difficulties in the way of management, supervision and formation of the societies.
2. *Selfishness of the Committees of management :—*The members of the Committees of management misappropriated the bulk of the loans by means of Benami loans and are guilty of criminal negligence of duty, of mismanagement and fraud.
3. *Nepotism :—*Favouritism in advancing loans is often shown by the members of the committee of management to their near relations and friends as also in the

repayment of the loans. Punctuality is not rigidly enforced and this delinquency coupled with apathy stands in the way of the other members getting adequate credit.

4. *Officialism*:—The notion that co-operation is a government obarity or the societies are "sarkar's banks" militates against the success of the movement. When we think of co-operation in India we do not call to memory the humanitarian and philanthropic Raiffeisen but the mercenary Registrar of the Co operative Societies.
5. *Red tapism*:—The delay in obtaining money drives the cultivators to seek shelter in the clutches of the money-lender.

Among other things the Committee suggested the establishment of Provincial Co-operative Banks and an All-India Co-operative Bank. In response to this provincial banks have now been established in all provinces except U. P., N. W. F. P. and the Centrally administered Areas of Delhi and Ajmer-Merwara. The Reforms of 1919 made co-operation a transferred provincial subject under an Indian minister and since then a great stimulus has been given to its development by consolidation and rectification of the existing societies and by encouraging the development of non-credit societies for productive and distributive purposes. *With the Reforms Act of 1919 the movement entered on its fourth stage of development.* This Act gave the option of retaining or modifying the existing Act of 1912 to the Provincial governments and so far the Act of 1912 has been replaced by new Provincial Acts in Bombay (1925); Burma (1927); Madras (1932); Bihar and Orissa (1935) and it is in progress in the Punjab. Provincial Enquiry Committees have also been set up and have reported in U. P., C. P., Madras and Burma, and All India surveys and inquiries have been made by the Agricultural Commission, the Central Banking Committee besides local investigation by provincial banking enquiry committees. All these reports contain a mass of valuable

information and suggestions for the improvement of the movement in all its aspects. Finally, the establishment of the Agricultural Credit Department of the Reserve Bank of India and the rural uplift and reconstruction movement organised by the Congress Ministries have infused a new spirit in the movement and given greater emphasis on the development of all round co-operation by the establishment of multi-purpose societies.

The movement has made a very steady progress but its success is greater in Bombay, Madras and the Punjab, because the cultivators there can offer mortgagable rights in the land as *real* security, while in other provinces Zamindari system prevents such rights of tenants who can offer only *personal* security. The C. B. Committee found that there were about 100,000 societies with 50 crores working capital out of which only 14 crores was made up of shares and reserves and the remainder of deposits and loans; and the movement had touched 15 million people, if an average family consisted of five persons. Since then the progress has been very rapid and in 1936-37 there were 1,10,967 societies with 4,718,141 members and 1,01,59,55,000 rupees as working capital. The overwhelming majority of these are primary rural credit societies. The progress of the movement, however, is very disappointing if the size and population of the country are taken into consideration. Only a small part of the needs of the rural areas is supplied by it, although its benefits are not only economic but social and educational also. It has saved a good deal in interest charges and provided for short and intermediate needs of the members at reasonable rates, besides a host of other material, social and educational benefits.

Co-operative Organisation

The organisation of the co-operative movement is federal and can be conveniently described in two broad heads: *Credit and non-credit with a further subdivision into agricultural and non agricultural*. As the movement was inaugurated in India

under official auspices with a view to solve the problem of agricultural indebtedness and to provide cheap but guarded credit for productive purposes to the ryot, *the rural credit society still occupies the pivotal position in the organisation of co-operative movement in India.* Credit still preponderates.

*Primary Societies :—*The primary societies form the base of the federal structure of co-operative credit movement. They are associations of borrowers and non-borrowers resident in the same locality. The membership is open to any person of good character without any distinction of caste, creed and calling so that a spirit of co-operation may be fostered. The area of operation is restricted to a village. Rural societies are organised on Raiffeisien model with *unlimited liability* which is an *ultimate contributory liability* arising only on the liquidation of the society. This liability of a member subsists for two years after the cessation of membership. A *Haisiyat* or property Register is kept for record of tangible assets of the society. The rural societies obtain their funds by shares (U. P. Punjab, Madras, and Burma), by deposits from members, non-members and sympathisers, and by loans, between $1/4$ and $1/8$ of the value of net assets only, from Central and Provincial Banks, and occasionally from the State in very small amounts. Entrance fees and reserves gradually built up by the societies also add to their working capital. The contribution of share capital is, however, not essential. The C. B. Committee recommended an encouragement of the method of subscription and deprecated the attraction of deposits from non-members at high rates of interest. They are to act as Savings banks and promote thrift. The maximum value of shares held by an individual is restricted as also his right to transfer or charge his shares; which are exempted from attachment or sale by courts or in insolvency proceedings. Every member has only one vote irrespective of the shares held by him. An elected committee with a president and a paid or elected secretary under the general body of shareholders looks after the management of the society. This executive or the managing Com-

mittee is called the Pauchayat or Panch. Loans are granted to members only and to non-members with the sanction of the Registrar. The loans are based on their objects and the repaying capacity of the borrowers, and are granted to the extent of 50% of individual assets of the members for cultivation expenses ; purchase of fodder, implements and cattle, payment of land revenue, redemption of debts and mortgages, personal maintenance, litigation and ceremonial expenses but not for speculation and wasteful expenditure. Unproductive loans are given sparingly, for smaller amounts and shorter periods than productive loans. They are advanced mostly on personal security of the borrowers and sureties and sometimes on the mortgage of property. The rate of interest varies from province to province and within the province itself. If there are reasonable grounds like failure of crops for default in payment extension is usually granted. All societies have to create and maintain reserve funds out of profits : societies without share capital carry the entire profit to an indivisible reserve whereas those with shares credit a substantial portion to the indivisible reserve and distribute the rest as dividends. Expenses on education and charity are also provided. Some societies give loans out of the reserve to their members while others deposit them with the central banks. The C. B. Committee has supported the latter practice and pleaded the grant of loans in lieu of these deposits at concessional rates to the societies concerned. The rural credit society enjoys a number of privileges. It has a prior claim, except in case of government dues, over other creditors of its members for agricultural loans, but there is no specific charge and the prior claim does not apply to all advances for crop financing. The Bombay Provincial Act has converted this prior claim into a first charge and the C. B. Committee has recommended the same to be done elsewhere. The primary societies also enjoy a number of other privileges in the matter of registration and stamp, money order commission, and are exempt from the payment of income tax.

After the second stage of development and since the Reforms

Act of 1919 the primary rural societies have made giant strides and in 1936-37 there were in all 96,209 agricultural societies out of which 80,915 were primary rural credit societies.

Primary Urban Credit Societies:—The urban credit societies are the most suitable agencies for non-agriculturists and cater for the financial requirements of small traders, artisans, petty shopkeepers, contractors, salaried men and wage-earners, weavers, black-smiths, carpenters, cobblers etc. On account of the difficulty of opening branches by the Imperial and other joint stock banks in smaller towns and talukas there is an imperative need and wide scope for the development of these urban banks in India. These are organised on the model of the Schulze-Delitzsch type of German credit societies in general, but some of them are organised on the Italian Luzzatti model with limited liability at their option. The MacLagan Committee recommended that the urban banks should be encouraged more vigorously and since then there has been a rapid increase in their numbers but still there is a very wide room for further development.

The points of difference between the rural and the urban societies have already been emphasized while dealing with the provisions of the Act of 1904, and they need not be repeated here. The number of such banks was only 5,936 in 1936-37. The Banking Enquiry Committees and the Foreign Experts advocated the establishment of such banks in as large numbers as possible. Their development will act as the most powerful lever for the revival of cottage and small industries by providing finance on co-operative basis and by making up for the deficiency of industrial banks. The small artisans and traders are in the iron grip of the urban money-lenders and the arhatiyas and are compelled to hypothecate their produce for obtaining raw materials and credit. They are prevented from selling in an open market at competitive prices. Therefore they are labouring under serious difficulties with regard to their marketing and financial needs like the village cultivators. Hence, there is an urgent need of co-operation among them. The development of artisan societies

however, has been inconsiderable. The growth of the urban co-operative banks has been hampered mostly on account of the difficulty of reconciling "business efficiency" with "democratic control". Their interest rates are still very high and they depend very much on deposits from non-members. Another difficulty arises on account of the government regarding both rural and urban banks as similar institutions and providing for their constitution and administration on similar lines with the patent distinction of a mere liability. They should be organised on business principles and their management should consist of trained and expert paid staff. The Maolagan Committee, while holding that the same principles of administrative control should apply to both rural and urban societies, was opposed to the formation of large societies, but this view is not held by both official and non-official co-operators now and specially in Bombay and Madras, and Mysore and Indore, where the urban societies have made better progress. The idea that urban societies should have their separate central and provincial banks for federation is not favoured, and it is thought that the existing central and apex organisation can effectively and efficiently cope with the urban banks together with the rural societies.

Besides artisans' societies a large number of other non-agricultural credit societies have of late come into existence. These are the People's Banks of the Luzzatti model in Bombay, Madras etc.; the thrift and life insurance societies of the Punjab, Madras and Bombay; the salary earners' societies for government and business employees in Bombay, Bengal and Madras; the communal societies, Factory Workers' Societies in important industrial centres, and the Depressed Classes Societies of Bombay. All these societies aim at the encouragement of thrift and saving by providing facilities for investment in small amounts and some of them aim at the redemption of old debts.

Central Banks and Unions :— Even before the Act of 1912 provided for the registration of central societies as powerful agencies to organise, control and finance the primary rural and urban

banks, a large number of central unions and banks had come into existence.

The primary credit societies in a certain area are affiliated or federated to a central society of individual members and primary societies. They are usually found in headquarters or other big towns of a district. If the membership of a central society is confined to primary societies only it is then called a Banking Union which may be either a "guaranteeing union" as in Burma, or a "Supervising Union" as in Madras and Bombay, or "Banking Union" as in the Punjab. The MacLagan Committee recommended the establishment of guaranteeing unions in all places where there are primary societies and central banks. When the membership consists of both primary societies and individuals then the central society is called a Central Bank which may be capitalist, mixed and pure. The former is dominated by individual shareholders and does not exist in India, while the mixed type comprising both primary societies and individual shareholders gives preference to the former in management and share capital and it is considered as the most suitable for India under the existing conditions and is most prevalent in all provinces. The pure or the ideal type comprises only societies as members, and is found mostly in the Punjab and Bengal. The MacLagan Committee and the C. B. Committee recommended that the societies should have a dominating voice in the management although the latter thought that individuals should not be eliminated. Their liability is limited. There were 611 central banks and 709 unions in 1936-37. The membership of the banks consisted of 85,127 individuals and 91,293 societies and they had a working capital of 29,49,89,991 rupees; whereas the membership of the 33,621 societies affiliated to the unions was 1,332,675 individuals and their working capital was 19,08,92,777 rupees.

The central banks are higher financing agencies and a link between the primary societies, the Apex Banks and the money market. They finance the primary credit societies and act as balancing centres to them as regards their working capital. They

raise funds and lend to the primary societies on co-operative principle either directly or through guaranteeing unions and very often look after their organisation and supervision through their staff of inspectors. Their area of operation ordinarily extends over a district. There are big size central banks in Bombay, Madras and C. P., but they are very much smaller in Bihar, Bengal, Orissa, U. P. and the Punjab. They also transact ordinary commercial banking to some extent. Their working capital consists of their own share capital and reserve, deposits of various kinds from individuals, local bodies and primary societies, over-drafts and short term loans from the Imperial and other joint stock banks and loans and advances from the Apex or Provincial Banks and some times from government and very seldom from other central banks (because such interlocking of liabilities is dangerous). The dividend paid by them is restricted by statutory rules and does not exceed 9%; their lending rates are usually higher than borrowing rates by 3%. Twenty-five percent of their net profits must be allocated to the reserve fund. To pay the claims of the depositors they are required to keep sufficient liquid resources in cash balances, unutilised cash credit with the Imperial Bank and Government promissory notes. The MacLagan Committee and the Reserve Bank of India have emphasised the necessity of maintaining fluid resources and attracting adequate long-term deposits. The C. B. Committee proposed the institution of a bad debt fund out of the annual profits in addition to the reserve fund to provide for losses caused by non-payment of loans by some of the societies. The Committee also proposed the coupling of a reserve liability with the limited liability of the primary societies only to increase protection to depositors and public confidence in them. These banks should so marshal their loans to the primary societies as to ensure sufficient repayment of cash to meet the withdrawal of deposits and should get cash, credit and discounting facilities for elasticity of their operations. The managing committees of these societies consist of the representatives of the primary member societies, which largely preponde-

rate in number and have a dominating voice in the management, and of influential persons of the locality. The central banks, however, have no control over the primary societies affiliated to them.

Provincial or Apex Banks:—The central banks in turn are federated into bigger central societies called Provincial or Apex Banks which coordinate and control to some extent the working of and act as financing agencies and balancing centres of working capital to the central banks. They act as a link between the provincial money market and commercial banks on the one hand and the credit societies and banks on the other. They grant cash credit and discounting facilities to central banks. They do not ordinarily deal with the primary societies directly except in places where central banks do not exist and they are conducted on business lines. They admit a large number of individual shareholders, but steps should be taken to give a dominating voice in their management to co-operative institutions. They get their working capital from their own share capital contributed by the affiliated central banks and individuals, reserve fund, various kinds of deposits from the well-to-do urban classes, primary societies and central banks and short-term loans, cash credits and over-drafts from the Imperial and other joint stock banks. They lend to the central banks and primary societies and through them funds flow to the individual borrowers in the villages. Except the conditions imposed on granting of loans, the Apex banks have no control or supervision on the central banks. They are also required to keep sufficient fluid resources and cash reserves for meeting the withdrawals of deposits and for elasticity of their operations they have cash credit and over-draft arrangements with the Imperial and commercial banks and carry on the ordinary business of banking. They have been kept on the "Approved List" of the Reserve Bank of India and like the scheduled banks get free remittance facilities and rediscounting of co-operative papers, cash credits and over-draft facilities.

There are 11 Provincial Co-operative Banks: 9 in British India viz. in Madras, Bombay, Bengal, Bihar and Orissa, the Punjab, Burma, the C. P. and Berar, Assam and two in Mysore and Hyderabad States. U. P. so far has no such bank and the establishment of one is badly needed. The Provincial and Central Banking Committees laid great stress on it. All these banks have formed the Indian Provincial Co-operative Banks' Association for co-ordination, and promotion of common interests and for supplying information as to each other's financial needs. The MacLagan Committee had recommended the establishment of an All-India Apex Bank to provide rediscounting facilities and elasticity of operations to the Provincial Apex Banks, but now that the Reserve Bank provides such facilities there is no need of an independent All-India Co-operative Bank. However, it should not be inferred from this that the Reserve Bank, having central banking functions to perform can play the role of an All-India Apex Bank. It can only help the Provincial Banks to tide over temporary financial stringency by acting as the 'lender of last resort.'

*Relation of Co-operative Finance with the General Banking System :—*The co-operative societies have offered a strong competition to indigenous bankers and money-lenders and having government protection they inspire a better confidence. In spite of this the relations between them have been generally cordial and the indigenous bankers help the societies in many ways. There seems to be little close competition between the commercial and co-operative banks for the present because their respective spheres of activities lie widely apart, but it has been alleged by the joint stock banks including the Imperial Bank that in matter of attracting deposits specially on account of their privileged position, and in purchasing drafts and selling remittance etc. there has been recently an unfair competition from the co-operative banks. This allegation, however, as reported by the Banking Committees, is not well-founded. The Governor of the Imperial Bank suggested before the C. B. Committee that

co-operative banks should confine themselves to co-operative banking and should not be allowed to compete with the commercial and indigenous bankers in other banking work. But the Committee did not agree and recommended that they should be allowed cheque-transactions, and granting of credit on current accounts and remittance business. The Assam Committee suggested that central and provincial banks should deposit their surplus funds with the larger commercial banks and the latter should lend to the former during the slack season. Closer connection between the two was also emphasised by the Burma Committee and the C. B. Committee supported both these views. In matter of produce loans competition may be expected in future.

We have already pointed out that cash credit and overdraft facilities are granted by the Imperial and some other joint stock banks to the central and provincial co-operative banks. The Imperial Bank has been doing it against government and other authorised securities and demand pro-notes of borrowers and the societies. However, the Bank has been less willing in recent years to extend this financial assistance against societies' pro-notes for short loans and has demanded government securities instead. This has been due to the excessive overdues, inefficient audit and control of the societies and the difficulty of selling the land of the members of the societies in the long run. The C. B. Committee therefore stressed the importance of the Imperial Bank granting more liberally these facilities of cash credit and overdraft to the central and provincial banks on co-operative paper. The Bank has agreed to deal with the matter more sympathetically in case of pro-notes of sound societies of A class. As to free remittance facilities, the C. B. Committee recommended that the Imperial Bank should not reduce the facilities in this behalf under the rules of the Central Government, and for remittance regarding non-co-operative purposes, it should give the same concessions to these banks as it gives to the joint stock banks.

The Reserve Bank now gives free remittance facilities for

co-operative purposes and for others at a nominal charge between its office centres and the Imperial Bank does so between its branch centres. Finally, the Agricultural Credit Department of the Reserve Bank has linked the co-operative banks with it and through them provides cheap and adequate credit facilities to agriculture in the following manner :—The Provincial Co-operative Banks have been made scheduled banks and get rediscounting facilities. The Reserve Bank has been allowed to buy, sell and rediscount agricultural bills and pro-notes endorsed by a scheduled bank or a provincial co-operative bank, drawn for the purpose of financing seasonal agricultural operations or the marketing of crops, and maturing within 9 months. It is authorised to make loans or advances for 90 days to provincial co-operative banks and central land mortgage banks declared to be provincial co-operative banks and through them to co-operative central banks and primary land mortgage banks against the security of (a) government paper, (b) approved debentures of recognized land mortgage banks, which are declared trustee securities and which are readily marketable. Further it can extend advances for 90 days to provincial co-operative banks against the security of (a) pro-notes of central co-operative banks and drawn for financing seasonal agricultural operations ; (b) pro-notes of approved co-operative marketing or ware-housing societies endorsed by provincial co-operative banks and drawn for the marketing of crops ; and (c) pro-notes of provincial co-operative banks supported by ware-house receipts or pledge of goods against which a cash credit or overdraft has been granted by the provincial co-operative bank to marketing or ware-housing societies.

Non-Credit Co-operation

The chief object of co-operation in India is the economic emancipation of the masses which can be achieved only by a radical reconstruction of the social and economic order extant. The economic rehabilitation of the stagnant villages, the uplift and extrication of the masses from the dismal abyss of ignorance, illiteracy, poverty, indebtedness, squalor and disease, their

rescue from the oppression and suppression of the land lord and the capitalist, can be attained only by promoting an all-round co-operative activity. Co-operative movement comprises credit, production, consumption or distribution. So far non-credit co-operation has not made much headway in our country and a very few production and marketing societies were to be found here and there. Recently, however, there has been an ever increasing recognition among both official and non-official co-operators that unless co-operation embraces all aspects of the rural life, it is impossible to revive the village in its pristine glory, "to galvanise the village community into life", and to deliver the peasants from their economic and social thralldom. The organisers of the co-operative movement in India committed a blunder in laying undue emphasis on the credit side of co-operation and neglecting the production, consumption and distributive aspects of it. Credit ought to have been "tacked on to production and marketing." The Provincial and Central Banking Inquiry Committees stressed the necessity of buttressing the co-operative credit movement with co-operative marketing so that the full benefits of co-operative credit may be reaped by the cultivators by the elimination of middlemen. To enable the farmer to free himself from the incubus of his dead-weight debt it is imperative that he must be placed on a "surplus economy" and that co-operation instead of dealing piecemeal with its members should cater for all their needs. The divorce of credit from production, distribution and consumption or from supply and sale must be given up. In place of single purpose rural societies there should be developed multi-purpose societies. The reconstruction of the primary credit societies with a view to deal with the whole man, to encompass the entire life of the peasants within their ambit, has been very strongly advocated by the Agricultural Credit Department of the Reserve Bank of India in its statutory reports and bulletins. Beginning with only one phase of the problem like credit, sale, purchase or better living, the society should start gradually other activities

to make a better and fuller life for its members and to secure a surplus income to them. A credit society, for example, may redeem members' debts through a land mortgage bank, purchase implements, bullocks, manure, seed etc. and sell their produce co-operatively, encourage the development of subsidiary industries avoid litigation through arbitration, improve crops by consolidation of holdings and supply of improved seeds and implements, provide medical relief, improve sanitation and drainage, and cut down ceremonial expenses and spread education through propaganda and organisation of adult and night schools etc. To enable the primary credit societies to do those things banking unions on the model of Kodinar Union should be developed as financing agencies. Expert opinion both official and non-official has veered round this view of the Agricultural Credit Department of the Reserve Bank of India, and with the advent of the Congress Ministries in eight provinces, rapid progress has been made in the development of all-round co-operation as the only solvent of the rural maladies. These Ministries have aimed at a complete re-orientation of the co-operative movement with a view to make the primary society the centre and pivot of all rural activities. They realised that the establishment of multi-purpose societies putting better living, better farming, better production and better marketing in the forefront was imperative to remove the wrong notion from the public mind that 'co-operation' is synonymous with 'credit' and that a co-operative society was an association of needy borrowers for productive or unproductive purposes.

Soon after the inauguration of the co-operative credit movement, a tendency towards the development of non-credit co-operation was visible and it was to meet this demand of the people that the Act of 1912 recognised non-credit societies. Still the preponderance of credit societies has persisted to this day; and although a number of insurance, better living, sale and purchase, housing, production, consolidation, and other non-credit societies have come into existence, yet the progress of

such societies has not been uniform in all provinces nor it has been very marked.

The non-credit societies broadly speaking can be discussed in two heads: agricultural and non-agricultural. Among the Agricultural non-credit societies the following are the most important:—

*Better Living Societies:—*The Rural Development and reconstruction programme of the Congress Ministries has given a very powerful drive to the development of better living societies. With the gradual removal of the obstacles in the way of expansion of the co-operative movement and with the avowed object of the Government to galvanize the rural areas into activity, various schemes for the expansion of education in rural areas, improvements in agriculture and cottage industries, the conferment of life tenancy and the sympathetic attitude of the zamindars and the passing of various debt legislations have created a very favourable atmosphere for the development of co-operation. The rural uplift and development programme included the establishment of better living and multi-purpose societies as a part and parcel of it. The aim has been the formation of a co-operative village bank of the Kodinar type or a multi-purpose society to embrace the whole economic and social life of the village either by the conversion of the existing credit societies or by the organisation of new ones. After a careful consideration, the Government in U. P. decided to work out a five year plan to have 30,000 societies and cover 35,000 villages out of a total of 1,05,640 villages in the province. Each year 200 young men with a rural bent of mind were to be recruited and trained as supervisors and appointed to organise and supervise multi-purpose co-operative societies for better living, better farming and better marketing so that in five years there would be 1000 trained supervisors in addition to auditors and inspectors. Rural industrial societies were also to be developed for the fostering of village industries like dairying, spinning and weaving, leather and sugar etc. The scheme was put into

operation towards the close of 1938 when at 3 centres classes for 350 supervisor candidates were opened. Unfortunately the Ministry resigned when the candidates had finished one year's training and as an economy measure during the War the present Government has suspended this useful activity. By June 1939 their number increased from 559 (in June 1938) to 1,436 better living societies and during the next four months, July to October, the development was very remarkable. More than 3,000 additional societies had sprung up, so that by October 1939 there were over 4,000 better living societies. Their number is still increasing. Similar progress has been registered in other provinces also. Some of the old credit societies have also taken up this work. An idea of the work done by these societies can be had from the following official summary. Out of 1,436 better living societies till June 1939 no less than 1,114 societies did better farming; over 1.11 lakhs acres were under improved wheat, over 1 lakh acres under improved sugar cane and 31,000 acres under other crops; 5,323 Meston ploughs, over 2,000 chaff cutters, 10,503 roller sugar mills and 1,100 improved implements were introduced; 1,000 wells were constructed and 260 wells provided with parapets and the societies maintained 2,646 free medicine chests; trained 1,554 dais at their expense and ran 437 adult schools.

Consolidation of Holdings and Co-operative Farming Societies :—We have already referred to this interesting experiment in the Punjab and U. P. and alluded to the remarkable success achieved in the Punjab villages where there are over 1000 societies. In U. P. upto June 1939 there were 130 such societies in the districts of Bijnor, Saharanpur and Moradabad. Land has also been acquired in Agra, Bulandshahr, Allahabad, Basti, Fatehgarh, Lucknow, Aligarh, Meerut, Ghaziabad, Fyzabad, Etah, Sitapur, Bareilly, and Muttra districts and some progress has been made in them. In C. P. also a similar movement is gaining ground as also in Baroda and Kashmere. There is a very big field for the development of consolidation societies and

without an all-round co-operative activity it is impossible to carry on peasant proprietary cultivation on sound economic lines. There is a very wide scope for the development of co-operative farming and a very interesting and successful experiment for the last four or five years has been carried on by the Aryasamajists in *Co-operative farming at Aryanagar* at a distance of six miles from Lucknow. Where the holdings are tiny and scattered, there is a very prospective field for the promotion of co-operative farming. In Bombay a number of *crop fencing and protection societies* have been started as also a number of *irrigation societies* in Madras and Bengal, and in U P. there were 76 societies in June 1939. Eight *land improvement societies* are at work in the Bombay Presidency.

Co-operative Marketing and Supply Societies:—The need and importance of Co-operative Marketing organisation in a country of millions of peasant proprietors who are heavily mulcted by money-lenders and other middlemen in the sale of their products is too obvious to require any emphasis. Denmark points as a beacon light to the Indian peasants re: the achievements of co-operative production and sale. "No other form of non-credit co-operation offers greater possibilities for improving the income and purchasing power of the agriculturist than organisation of co-operative marketing." And yet it is a pity that inspite of the co-operative movement being there for 36 years very little headway has been made so far in organising co-operative sale and purchase societies for both agricultural and industrial products of the village. On account of small scale of business, lack of trained and efficient staff and management, the co-operative supply societies for implements and tools, manure, seed and cattle etc. and sale societies for the farm produce and the products of the rural arts and crafts have made but little advance. In the post-depression period, however, the co-operative marketing has made rapid strides and one can confidently look to the future for a still greater development of such societies with the gradual but steady realisation that

co-operative credit without co-operative production and sale can never place the Indian peasant in a position of surplus economy. The recent marketing organisation under the auspices of the Imperial Council of Agricultural Research and the Agricultural Produce Markets Acts in the various Provinces and States also promise a very suitable field for the development of co-operative marketing.

In Dharwar, Broach and Surat a number of *Cotton Sale Societies* and in Coimbatore and Arcot districts a number of cotton and *Ground-nut Societies* have been very successful; and commission shops in the Punjab; *Milk Societies and unions* in Bengal Madras and U. P., the *Potato Marketing Societies* (25) of the Almora and Naini Tal districts with two central unions at Bhowali and Garampani; the *Fruit Societies* of the hilly areas, and Poultry Societies like those of Allahabad, Fyzabad, Lucknow etc., are examples of co-operative marketing and production. *Dairy Societies, Purchase and Sale Societies, Cane Supply and Development Societies, Ghee Societies and Seed Stores* are other very interesting developments in Co-operative supply and sale.

The establishment of *Cane Development and Supply Societies* has been a very interesting and useful co-operative activity in recent years. There are two kinds of cane marketing societies (a) those formed in the gate areas of certain factories as a part of the Cane Development Scheme and (b) those organised by the Co-operative Department for whole districts or sub-divisions. The areas of operations of the former are restricted while those of the latter are extensive. Moreover, the former pay attention to both agricultural marketing and improvement and the latter till recently confined themselves to marketing only. Now, however, they have taken to improvement as well. The Cane Development Scheme was started in 1935 in U.P. and the province was divided into three ranges for administrative purposes viz., the Central, the Western and the Eastern; each in charge of a Cane Development Officer. The number of primary cane supply societies increased from 28,477 in 1938 June to 42,681 in June

1939 on account of the increase in the number of the sugar factories. They supplied 6 crore maunds of sugar cane i.e. half the total quantity crushed by the sugar factories in U. P. and earned Rs. 9 lakhs as commission. During the year they also took to better living activities like village uplift with great enthusiasm and success. The membership of the societies consisted of 3,70,000 growers. The largest number of the societies are in the Gorakhpur district. Other districts where the societies are developed are Bijnor, Dehradun, Badaun, Meerut, Muzaffarnagar and Moradabad. A similar development has also taken place in Bihar. There were 6 Gur Societies in U.P. in 1939.

Ghee Societies :—The first society in U. P. was organised at Chaubonkapura in 1929 in the Agra district. The Adulteration of Foods Bill provided against the adulteration of ghee. The number of the societies increased from 153 in 1937 to 277 in 1938 and to 392 in June 1939, with a membership of over 6,000 and between 1938-39 they sold 5,500 maunds of ghee and earned profits of over 28,000 Rupees. There were 5 central unions in the Province.

Cattle-breeding and Insurance Societies :—The breeding of cattle on scientific lines, on account of the absence of a well-organised dairy industry in the country, is not well developed and therefore agricultural insurance is still unknown to the Indian peasant. However, a few cattle breeding societies and central unions are to be found in some districts of U.P. like Rae Bareli, Meerut etc., and in the Punjab, Bombay, Madras etc. Bombay, Burma and Madras have a few Cattle Insurance Societies but they are fast disappearing. There were 15 breeding Societies in U.P. in 1939.

Co-operative Life Insurance Societies have recently been developed. The most important of these are the Bengal Provident Insurance Society (1929) and the Co-operative Life Insurance Societies of Bombay (1930) and Madras (1932). They operate over the whole of India and there is a proposal to amalgamate them into a large society.

Co-operative Stores movement is also not developed in the rural areas and even in the urban centres it is little developed. There are many small stores in all the Provinces and States and specially in Bombay; Matunga, Dadar and Mysore they are well-developed. The B. B. C. I. Railway stores at Ajmer and Dadar and the Triplicane Co-operative Store in Madras, which is the biggest store in the whole of India, are well known. Several students stores are also to be found. Still there is a great need and a very wide scope for their development. C R Fay says "I believe that India today stands more in need of Rochdale than of Raiffeisen."

Industrial Societies and Stores :—Industrial Societies for both artisans and peasants have been recently organised in all the provinces but they have generally speaking failed to achieve any substantial result. The greatest success has been achieved in organising the *handloom industry* on a co-operative basis. The Central Government has recently granted a subsidy for five years to all the provinces for the purpose. This together with the stimulus given by the All India Village Industries Association and All-India Spinners' Association has provided an ample scope for the development of the village handloom industries. For the revival of the village arts and crafts and for small and cottage industries co-operation for purchase of raw materials, provision of credit and finance and for the marketing of the finished products will be a great boon. The recent marketing organisation and industrial banks in some provinces have provided improved facilities to the cottage industries. The U. P. Government Arts and Crafts Emporium and the Industrial Finance Corporation have opened out great possibilities for the cottage industries and to take advantage of them they should be organised on a co-operative basis. We have already alluded to the organisation of cane development and supply societies and Ghee societies. Besides these leather, rope, baskets etc., can be very efficiently organised on co-operative lines. Recently sugar industry has been organised on co-operative basis e.g. the Co-operative Sugar Factory at Biswan, in U. P.,

Naogaon Agricultural Society in Rajshahi, Kistna district—the largest co-operative industrial concern with a capital expenditure of 15 lakhs and 1,000 ton capacity. Many societies in the Punjab and Bombay etc. for artisans, weavers etc. have been started. The most important and well-known industrial societies in U. P. are the Cawnpore Knitting and Weaving Society, Mason's Industrial Federation, Bara Banki, Sandila Industrial Stores, and Weavers' Societies at Agra, Etawah, Tanda, Fyzabad, Cawnpore, Mau, the Cotton Production and Sale Society, Bilgram, and the Blanket Spinning and Weaving Society at Najibabad.

Housing Societies:—With the development of modern industrialism the problem of sanitary dwellings and clearance of slums in industrial centres has assumed a very great importance and co-operation has been successfully applied to solve this problem in various progressive countries. In our country also co-operative housing societies have been successful in Bombay, Madras and Mysore. The Madras Societies are individual ownership societies, while those of Bombay are tenant ownership or tenant co-partnership societies. There are a number of housing societies for the middle classes in the various parts of the country. Under the Bombay Co-operative Housing Association there are a number of such middle class housing societies and the total number of all these societies in 1936—37 was 85. There were 20 Housing Societies in U. P. in 1939 mostly for Government Officials at Bulandshahr, Agra, Lucknow, Ghaziabad, and a Lawyers' Society at Basti. Unfortunately the societies in the last three towns are in a moribund condition on account of faction, litigation and lack of co-operative spirit. The co-operative housing, like the consumers' stores, has so far been only a middle class enterprise and the problem of providing decent and sanitary houses to the poor working classes and peasants both in the towns and in villages remains still unsolved. The Whitley Commission on Labour in 1931 and the Mysore Co-operative Committee in 1923 laid great emphasis on provision of housing facilities to these classes. Cheap and adequate long term finance

is the chief requirement of these societies, and on account of the withdrawal of former help by the Provincial Governments, these societies have suffered a set-back. The Provincial Governments should be more sympathetic towards these societies and the Provincial Co-operative Banks should, so far as possible, finance these societies liberally.

Depressed Classes Societies have recently been started for their better living, cheap credit, better housing, improvement of industrial pursuits and vocational organisation.

Women's societies for thrift and better living numbered 65 in 1939 in U. P. and were to be found in Lucknow, Moradabad, and Mainpuri. Seven adult schools were also run by them. The Government Arts and Crafts Emporium gets work done by the members of the Lucknow societies in their homes. The Women's Co-operative Industrial Home also does useful work in Bengal. There are a number of *Co-operative Anti Malarial Societies* on the Yugoslavian model in Bengal. Of 2,281 primary public health and anti malaria co-operative societies 1,102 have been registered.

Defects and Suggestions for Improvement

The co-operative movement in India suffers from many serious defects. Firstly, *there is an excessive and vexatious official control which makes the movement mechanical and checks the development of the true co-operative spirit, self-help and sense of responsibility among the members*. The Government have taken a vigorous initiative in developing the movement and have judiciously avoided the policy of financial spoon-feeding because it is very undesirable. The Central Banking Committee recommended that in the interest of the tax-payer and of the fostering of self-help and self-reliance in the co-operators the Government should give only temporary financial aid to the societies to tide over an emergency. As regards official control and supervision, since 1921 there had been a tendency to liberalise and de-officialize, as far as possible, the movement on the recommendations of

the MacLagan Committee and others, but since the recent depression there has been a tendency in the reverse direction. To improve the management of the societies the Registrars in certain provinces have proposed to nominate representatives of capitalists to the committees of management "with a view to infuse some new blood of 'business capacity' into our pale and anaemic committees". This is a wrong step and will weaken the sense of responsibility and self-help in mending matters. The Department will do well to keep a constant vigilance and give expert technical advice and not meddle with the internal management. It should be guided by the well-considered recommendation of the Central Banking Committee that there should be a relaxation of official control to popularise the movement and to develop a sense of responsibility and self-confidence among the members.

Secondly, there is an excessive preponderance of credit societies which are the simplest to be organised, supervised, and managed. One of the fundamental reasons which have belied the hopes of the co-operators both official and non-official that co-operation would prove a panacea for the rural areas, would free the village peasants from the thralldom of the money-lenders and would lead to the fructification of the agricultural profits into the pockets of the cultivators, is this excessive emphasis on credit co-operation to the exclusion of other aspects of agricultural improvements. In the words of Mr. V. Ram Das Pantulu the Editor of the Indian Co-operative Review, "Our failure to realise our expectations is due not to the unsuitability of the co-operative credit for such a purpose but to our neglect to link up co-operative credit with programmes which will increase the agriculturist's earning and purchasing power so as to enable him thereby to save and not to borrow." An all-round co-operative activity to resuscitate and revitalise the stagnant villages is the crying need of the hour. In any scheme of economic reconstruction of the villages and their teeming millions multi-purpose co-operative society holds the key-position. It is a happy sign for the future of co-operation that an increasing emphasis has

been laid recently on the development of not only primary credit societies but societies, for consolidation of holdings, for purchase of manures, implements, and seed, for marketing, for better living, for cattle insurance, for housing and for stores etc. etc. to achieve the well-known tenets of the co-operative movement "better living, better farming and better business". Very great strides were made recently by the popular ministries in this direction and the results obtained have been encouraging.

Thirdly, there has been *no proper separation of long term, intermediate and short-term credit supply to the cultivators*. Co-operative loans are either short term, intermediate or long-term and "gross yield and normal net savings and enhanced margin of profits constitute, from a true economic standpoint, three distinct sources of repayment" of these loans respectively. The non-observance of these economic considerations in the transactions of our co-operative credit societies and the dispensing of short-term loans for long-term purposes and vice versa, without reference to the repaying capacity of the borrower and his resources, are, largely responsible for the dislocation and chaos of our financial arrangements. To remove this the primary societies should be restricted to the financing of short term and intermediate credit needs only and for the supply of long-term credit land mortgage banks should be established.

Fourthly, *there is a lack of knowledge, and proper understanding of co-operative principles and essentials of rural credit among the members*. The supreme importance of educating and supervising illiterate masses of cultivators and teaching them to manage their own affairs has not been realised. Without education and enlightenment the cultivators cannot grasp the fundamentals of co-operation. The Co-operative Departments and Institutes should take special steps to provide adequate and efficient training to official and non-official staffs of the societies and the services of school teachers and retired officials in rural areas should be requisitioned. and trained secretaries should be

appointed. The Government should spend more on such education of staff and members. This neglect of the education of the members and the *punches* in the theory and practice of co-operation is one of the causes of the weakness of the movement here. There is a general consensus of opinion among co-operators that the co-operative education should be completely dissociated from official control. The C. B. Committee also felt that co-operative colleges should be established and conducted by co-operators and that Governments should give them financial help through grants. The Standing Committees of the Indian Provincial Co-operative Banks' Association and the All-India Co-operative Institutes' Association at their joint session at Fyzabad in 1936 requested in a resolution the Central Government and the Agricultural Research Council to assist them in the establishment of a Central Co-operative Research Institute, and urged upon the Universities the desirability of instituting courses in co-operation in the Arts, Commerce, Agriculture, and other Technical degrees for higher studies in co-operation in the various provinces. Practically all the universities have responded to this request.

Fifthly, audit is defective and does not conform to the statutory provisions partly because of the paucity of auditors and partly because audit, supervision and inspection which are allied functions are performed by different agencies and this causes overlapping and waste of efforts and money. Inefficient and incomplete audit causes mismanagement, embezzlements and loss of public confidence. Co-operative audit includes examination of over dues and of the revaluation of assets and liabilities. For efficient audit, supervision and inspection of the societies, district unions registered under the Co-operative Societies Act, should be formed of the primary societies of the area. The managing-boards of the unions should be composed of representatives of the societies and specially trained government officials and the staff should consist of persons licensed by the Registrar. These unions should provide training to candidates for appointment on

the auditing, supervision and inspecting staff of the co-operative organisation. They should work in close co-operation with central banks and should be federated into a Provincial Union or affiliated to a specially created audit branch of the Provincial Co-operative Institutes. The scheme of audit and supervision planned by the All India Co-operative Institutes' and Provincial Banks' Associations have not been seriously considered by the provincial governments as yet.

Sixthly, the control and management is inefficient and this breeds many defects. The managing committees in many places are not properly controlled by the general bodies and appropriate large loans to themselves. Loans are granted recklessly and extensions given without reasonable reasons. Repayment of loans are neglected by members and still no action is taken against them. This results in excessive overdues. There is a tendency not to liquidate the societies even if their condition is irreparable. Proper distinction between various forms of loans and credits is not drawn and accounts are not kept properly or up-to-date nor the assets of the societies are revised carefully. Thus in the words of the Governor of the Imperial Bank of India, "*the fundamental principle of true co-operation is lacking. Overdues are highly excessive. Audit is defective. Control is inefficient*". To remove these serious defects, the economic purpose of the loans, the legitimacy of the needs for them, their effects on productive activities, the sources of repayment and the repaying capacity of the borrowers should be properly and carefully scrutinised at the time of granting loans. Loans to the members of the managing committees should be granted only in general meetings, and supervisors and central banks should see that excessive amounts have not been given. Extensions for repayment should be granted only in exceptional circumstances and defaulters should be dealt with severely. The period for repayment should vary according to the needs of borrowers but should not be more than 3 years. To avoid the evils of bad management, if the Panchayat of a society grants loans in

excess of the limits fixed by its by-laws or otherwise, then the members of the Panchayat should be held personally responsible as guarantors of the loans. Concentration of control into the hands of a fewer number of members prevents smaller producers from getting adequate finance, and, in case of central banks, it leads to overfinancing to keep up dividends, high interest on deposits and superfluous deposits. Special steps should be taken to avoid it and the members should be taught to get rid of dishonest office bearers. The property statement of the societies should be kept up-to-date and prepared carefully.

Seventhly, co-operative finance is very often inelastic, dilatory and inadequate chiefly because of the inefficiency or selfishness of the managing committees. Inconvenience, delay and inadequate loans drive the cultivators to the money-lenders. Many societies borrow as much as they can from central banks once a year and lend to the members in lump sums in the expectation that the finance would last the whole year, but the members spend the loans as fast as they can and then depend on the money-lenders for their future needs. To avoid these defects the normal credit system should be introduced. In this system, the society fixes the credit limit of every member in advance and arranges for the necessary funds in time in the form of cash credits with central banks and then lends to the members as they need. The members pay interest only from the time when the finance is availed of. Applications for crop finance can be made and sanctioned beforehand. The grant of cash credits on current account and cheque transactions should be introduced wherever possible to arrest the evils of inelastic and dilatory co-operative finance.

Eighthly, co-operative credit in many provinces is much too costly because of the intermediate agencies—the primary, the central and the provincial co-operative banks—which have to provide for their working expenses out of the difference between the borrowing and the lending rates. The primary societies do not ordinarily work as the 'savings and loan' banks of their

villages and balancing centres for the demand for and supply of money; they are mere agencies for distribution of funds, except in Bombay, obtained from the outside agencies. To reduce these rates punctual repayment by members and reduction in overdues, borrowing by central banks at cheaper rates and utilisation of surplus urban money in the slack season and reduction in their working expenses, direct tapping of savings by the rural societies, and a closer co-operation between the central and provincial banks should be effected. Moreover, the profits of the societies and banks should be exempted from super tax as also their earnings from investments in government securities and debentures of land mortgage banks and they should be exempted from court fees and stamp duties.

Finally, the co-operative societies and banks should collect savings deposits and encourage savings during plenty for use during scarcity, cheque transactions should be developed, the banks (central and provincial) should be managed by men trained in banking and co-operation; the central and provincial banks should be co-ordinated and there should be the fullest co-operation between the Agricultural and Co-operative Departments. To finance the marketing of crops on a co-operative basis loans should be given liberally to the societies and central banks for the erection or purchase of godowns in the mofussil

Suggestions of the Reserve Bank Agricultural Credit Department

I. With a view to rectification and consolidation of the co-operative movement (*i.e.*, to improve and strengthen the working of the societies by speeding up recoveries for reduction of overdues, by properly scrutinising the loans and the repaying capacity of the borrowers and by large reductions in interest rates), *the Reserve Bank of India in its Statutory Reports has made the following suggestions:* '1. The overdues and long-term loans should be separated from short-term loans and placed on a proper footing. For this purpose the overdues should be reduced to such an extent that they may be cleared out of profits within 20 years by being written off from reserves in part and recovered

in part from sale of members' assets and the remainder spread out in instalments and transferred to land mortgage banks. Such a course will prevent with-holding of further finance or whole-sale liquidation of societies in arrears.

II. The societies are advised to build up strong reserve funds by keeping adequate margin between their borrowing and lending rates. This would help them in meeting losses during crop failures when the members are not able to repay loans. Remissions and extensions can also be granted. It is feared in certain quarters that this would raise the interest rates.

III. Loans in future should be restricted to productive purposes like cultivation expenses; implements and cattle etc. and loans for other unavoidable purposes should be reduced to a minimum and kept within the repaying capacity of the cultivator, who should be discouraged from living beyond his means. To secure this, he should be prevented from borrowing from more than one source and total liability should be limited according to the value of the land or its rental.

IV. The primary credit society, being the pivot of the whole movement, should be reconstructed on sound lines to enable it to secure to the cultivator the benefits of not only cheap but guarded credit but also the benefits of "better living, better farming and better business." It should be a multi-purpose society and bring the entire life of the cultivator within its ambit. It should be composed of members who understand the basic principles of co-operation and are imbued with the co-operative spirit of self-help and self-reliance. It should inculcate habits of thrift and investment by inviting members to deposit and take shares. The primary societies should be federated into small banking unions on the lines of the Banking Union at Hyderabad for conducting the allied functions of finance, supervision, and education. They should be induced to take up joint marketing of agricultural produce of their members and should be linked up for this purpose with the central sale societies. This would secure the benefits of handling produce in

bulk, uniformity in quality and storage and collection. They should have their own godowns and supply improved seeds to their members. The central and provincial banks should be re-organised to maintain fluid resources, and adequate reserves and should be in closer contact with commercial banks of class A. The co-operative staff should be trained intensively in co-operation, rural economics, and banking.

Recently, the grant of Rs. 15 lakhs by the Central Government to the provinces has led to the starting of valuable co-operative training schemes in the various provinces, and the powerful drive of the Congress ministries in eight provinces for rural uplift and reconstruction has given a very welcome and healthy stimulus to the development of multi-purpose co-operative societies. It augurs well for the future, and one may cherish the hope that, if the co-operative movement is revitalised and conducted on sound lines, as suggested by various committees and commissions, there is no reason why co-operation must not be the most potent factor in the social, educational, and economic regeneration of the stagnant villages and their teeming millions in India. The recent debt legislation, relief measures, regulations of money-lenders, protection of debtors and conciliation and reduction of debts have done a good deal to improve the economic strength of the cultivators, to reduce their overdue and financial embarrassment, caused by the recent economic blizzard. These measures at best can work only as solvents of indebtedness but by themselves they cannot revitalize and rehabilitate the peasant economically. For this the only remedy is more, more, and more co-operation. Therefore, the recent concentration at rectification and consolidation of the societies should not be carried to excess and to stagnation. Rectification and expansion of all-round co-operation must go hand in hand to secure the economic resuscitation of the peasant.

Retrospect and Prospect :—The importance of Co-operative Societies in connection with agricultural improvement, education, irrigation and in fact with any and everything affecting the

cultivator can hardly be over emphasised. *"The function of the Co-operative Department apart from the provision of credit, is to prepare the ground for the advice of various experts employed by Government in its several departments. Naturally these departments can work best through co-operatively organised bodies of cultivators rather than through isolated individuals. The co-operative society should be the unit through which the various departments of Government concerned with rural welfare carry on their activities."* The commissioners conclude that the greatest hope for the salvation of the rural masses from their crushing burden of debt rests in the growth and spread of a healthy and well-organised co-operative movement based upon the careful education and systematic training of the villagers themselves. Apart altogether from the question of debt, co-operative credit provides the only satisfactory means of financing agriculture on sound lines. Thrift must be encouraged by every legitimate means, for the savings resulting from the thrift of the cultivating classes form the best basis of the capital they require. If the rural community is to be contented, happy and prosperous, local governments must regard the co-operative movement as deserving all the encouragement which it lies within their powers to give.

The effects of the co-operative credit movement have been very short of revolutionary. Besides providing cheap credit it has important moral, educative, sanitary, social, economic and administrative effects too. With their aid labourers have become owners, hopeless and chronic indebtedness has been removed partially and the Mahajan driven out, though not entirely, agriculture and industry have been developed, and the villagers in the poor tracts have been made prosperous, the illiterate man has turned towards education and the drunkard has been reclaimed; the middleman has been eliminated, the ryot is getting better value for his produce, and paying his rent with ease; village life has been stimulated by associated action and by the business education of the bank, punctuality, thrift, and mutual confidence are being taught; litigation has decreased and morality

has improved; activity has taken the place of routine and stagnation: associated action has replaced mutual distrust. It has tempted hoarded money out of its concealment and has attracted the funds of the general public. It has made the cultivator less dependant upon Government financial support than formerly, has liberated many from the usurer's yoke, has replaced hopeless insolvency by solvency, provided ample credit to the cultivator cheaply and has saved a crore of rupees only in interest payment. The position of the money lender is gradually breaking down, and indirectly the movement is bound to play an important part in the development of commerce and industry.

Co-operation, however, has not proved a panacea for all rural evils: it has failed to tackle successfully the most urgent need of the rural population—the redemption of debt. The co-operative movement was inaugurated here to meet the problem of rural indebtedness by wiping out existing indebtedness and preventing further indebtedness and to mobilize the scattered savings of the agriculturists and promote thrift, self-help, mutual trust and confidence, and thus enable the cultivator to get cheap credit from the combined resources of his own class for his requirements. No doubt, the indebtedness of various cultivators in different provinces has been removed, but in many cases it has increased on account of the shortcomings of the movement here. The delay often involved in obtaining loans tempts the cultivator to go to the sahukars. In other cases, indebtedness has remained stationary. As regards, the second problem, the movement has not been an unqualified success. In the *first place*, its success presupposes such economic conditions as are absent in India. It presupposes the existence of savings and that the Indian cultivator is a man who can save but is thriftless, and that he can be educated into thrift, and thus, secure for himself the advantages of combined credit. Here, however, we have a peasantry heavily weighted down in debts, and where he is not in debt, the farmer lives from hand

to mouth without the remotest possibility to save, even if he has the willingness to save. *Secondly*, it presupposes education, and the cultivator here is hopelessly illiterate and ignorant. *Thirdly*, it presupposes for its success spontaneity of demand and initiative on the part of the people and some readiness to adopt its principles and profit by its opportunities—qualities in which we are sorely lacking. *It is essentially, a movement of the people for the people, and, should be conducted by the people which will lead to a stimulation of that desire for knowledge which is at present generally lacking in the Indian ryot.* Unlike Germany and Denmark the movement was inaugurated here by Government initiative and was imposed from above. The result is that when we think of co-operation we recall to mind the mercenary Registrar, and not, as in Germany, the missionary, the humanitarian and the philanthropic Raiffeisin. Hence, the notion that co-operation is a government charity or the societies being called as "Sarkar's Banks" militate against the success of the movement. Illiteracy of the people leading to difficulties of management, supervision and formation, the selfishness of the committees of management, and favouritism in advancing loans and unpunctuality in repayment coupled with apathy and long overdues are further obstacles in the way of the movement. The remedy lies in making primary education compulsory and in providing careful organisation, inspection, audit and instruction and in business-like financing. To rouse the cultivator from his sloppiness an intensive propaganda should be organised to teach and guide him. It is interesting to note that recently there has been awakening a spirit of social service among the educated classes. It should be the bounden duty of every educated youth of the country to guide and help his less fortunate compatriots in the onward march towards material, moral and physical prosperity, vigour and health. Through organising meetings, holding lectures by lantern slides, or radio and cinema films through the local social and religious institutions a wide and persistent propaganda should be carried on to teach the cultivator the significance of an improved standard of living. Until the standard of living of

the cultivating classes can be increased to provide them with an incentive to an all-round improvement little can be achieved in the way of the improvement of Indian Agriculture. The standard of living can be raised only through the adoption of preventive checks to multiplication, but the illiterate masses will not appreciate this remedy. The more direct and most effective agencies for doing it are education, travel and example. This guidance should be given by the educated classes to appeal to a tradition of co-operative action for mutual benefit. The system of village guides devised by Mr. Brayne in the Gurgaon district of the Punjab should be adopted in other provinces also. Co-operative Better Living Societies should be formed and Central Rural Community Boards like that of the Punjab should be established, and facilities should be provided for the settlement of village disputes by local arbitration organised on a co-operative basis. The most efficient means of effecting any improvement in the rural conditions lies in education. True it is that the traditions of Indian life have imprinted on the mind and heart of the Indians the deep spirit of social endeavour and work that underlies the co-operative movement; but that spirit needs to be roused by a favourable and more congenial environment into activity; and this can be done only through the wide diffusion of education. As Dr. R. K. Mukerji has said in his *Rural Economy of India*: "Above all, there is need of a comprehensive policy of education, for without a wide diffusion of education among the villagers, neither the modification of rights in land nor the introduction of the economically profitable cultivation unit; neither the facilities given by co-operative credit nor the aids given by improved agricultural implements and methods, can bring about a lasting improvement of the social and agricultural conditions of the country." *"In the absence of this stimulus, the co-operative movement may keep alive as an exotic plant, but will never thrive."* However, "we do not for a moment deny the intrinsic value of the co-operative movement as a factor in the advancement of education, of material prosperity and moral

uplift. What we are pointing out here is the broad fact that, with an illiterate, famished population in the clutches of the money-lender, with the rapid exhaustion of the soil, and the disintegration of the economic holding, and in the almost complete absence of non-agricultural industries, which can draw off the pressure on the soil, it is vain to expect co-operation by itself to work wonders and to bring about the revival of agricultural prosperity."¹ Therefore credit should be linked with agricultural improvements and marketing, and the Agricultural and General Administration should co-operate with the Co-operative Department.

¹ Wadia and Joshi: "*Wealth of India*."

CHAPTER XII

Improvement of Agricultural Practice and Equipment

Implements and Tools:—Among the causes responsible for the backwardness of Indian agriculture, crude and archaic agricultural practice and poor equipment in implements and tools, manure, good and sturdy live-stock etc., occupy no mean place. Sowing, reaping and winnowing etc., are done by hand; very little manure is applied to the farms; and the draught cattle are very small, weak and emaciated, with a low vitality and very high mortality. The standard of cultivation, due to the subdivision and fragmentation of holdings, poverty and indebtedness, and certain systems of land tenure is very low; and illiteracy and superstitious tenacity to old-fashioned implements and tools further aggravate the situation. The implements and tools are very simple, light, easy to repair, and cheap but inefficient. The wooden plough with an iron tip simply stirs the soil and does not invert it. The Patha or the wooden beam serving as a roller, clod-crusher or leveller and soil-compactor, the wooden yoke, the sickle, scyth and the Khurpa, the spade and the stick etc.,—these sum up the simple and light hand-worked tools and implements. In the words of Darling, "The plough that looks like 'a half open pen-knife', and just scratches the soil; the hand-sickle made more for a child than a man; the old-fashioned winnowing-tray that woos the wind to sift the grain from the chaff; and the rude chopper with its waste fodder, are undisplaced from their primitive but immemorial functions." Similarly Dr. Clouston says that "the Indian peasant's tillage implements are so light and small that they do not kill out weeds effectively; nor can they be used for ploughing under weeds and other forms of leaf manure when that is necessary. Having no breast, the country plough stirs the soil

without inverting it; and having no cutting parts it does not eradicate weeds." The universal use of the wooden plough differing in size from one part of the country to the other, is explained by the anxiety of the peasant to conserve moisture in the soil, by the low hauling capacity of his draught cattle, the bullock, half-famished and in bad repair; by the paucity of stocks of manure and fertilisers; and by the ease and cheapness with which it can be constructed and repaired by the village carpenter and blacksmith. Thus, the heavy weight, deeper ploughing and higher price of iron ploughs stand in the way of their being generally utilized.

In spite of these difficulties, there has been an increasing use of the improved iron ploughs of certain varieties in the different parts of the country. The sugarcane iron-rollers, the chaff-cutter, etc., are generally being used. There is the necessity still to produce cheaper and lighter ploughs which can be easily replaced in parts, repaired and constructed in the village with the local equipment of the blacksmith and the carpenter, and can be drawn by the poor and weak cattle. In many provinces seed-drills are in use in drilling the crops in rows for inter cultivation. Cheap mechanical winnowing machines designed by the agricultural engineers are also gradually gaining ground and tractor ploughing in the United Provinces, Bombay and some States to eradicate the weeds is coming into vogue. The village craftsmen also have begun to produce improved types of implements and tools. Small pumping machines and water lifts are also coming into general use in the "Grid" areas in U. P., Mysore, and the Punjab. Harrows, hoes etc., are also being utilised. Still there is a wide scope for improvement in the implements, and the technique of demonstration of improved tools and implements has recently been improved. The bullock cart is still old-fashioned and requires immediate improvement.

Although mechanisation has a limited scope in India, and on account of her peculiar institutions, large scale capitalistic

farming is unsuited to her, yet improved and scientific implements and tools and co-operative and joint farming will go a long way in increasing the yield of the crops. Co-operative societies for better implements and tools should be encouraged to carry on propaganda and demonstration in co-operation with the Agricultural Department.

The necessity for a suitable adjunct to the cattle power now employed has for some time been occupying the attention of agricultural experts. (The more progressive farmers now realise that crops like sugarcane depend for their yield as much upon a more intensive ploughing as upon increased supplies of manure and water, hence, the interest in agricultural motor tractors. Experiments and demonstrations have been held with a view to testing their suitability, and introducing their use. But for some time to come their utility will be limited on account of their high cost and the small size of the average holding. In several places they have been found quite unfitted for deep ploughing, and they prove advantageous only for reclaiming large stretches of land.) The introduction of improved tillage implements from the west has already done much to raise the standard of farming and work in this direction is being pressed forward. Thousands of improved implements are to be seen in the countryside, but as we have just remarked, a serious difficulty in the introduction of improved drills, mowing machines, fodder cutters, threshers, winnowing machines, cane mills, inverted iron ploughs etc., suitable to the different needs of the various parts of the country is the low purchasing power of the people; and various agricultural engineers have been engaged by the Provincial Departments of Agriculture to encourage and facilitate the desired progress by the invention of simpler and cheaper implements of the necessary kinds than the imported ones. The last one or two decades have seen tremendous strides in the popularising of modern implements and at the Bombay Agricultural Show held at Poona in October, 1926, the machinery section alone contained exhibits of farm machinery valued at many lakhs of rupees which indicated

that the demand for modern implements is fast increasing.¹

Let us look a bit more closely into the possibility of the use of mechanical power in agricultural improvement. (The steam or oil engine possesses this advantage over the cattle as a source of power that the consumption of fuel is limited to the periods during which the engine is running; while, on the other hand, its capital cost is relatively very large and its range of efficiency small. Now, it is impossible, impracticable, to standardise agricultural processes to a definite load, and the alternative is therefore, to run the engine uneconomically or to sink large amounts of capital in engines of varying capacity. Hence, the use of mechanical power is impracticable here.) Mr. Leake writes in his *(The Basis of Agricultural Practice and Economics)* that the work of a farm is seasonal, being greater at some seasons than at others. Throughout the plains there is, in the early months of the year, little work requiring power when the crops are growing in the fields. The different tracts differ in this matter; for a considerable amount of power is required in the cane-growing tracts for cane-crushing and in well-irrigated tracts for lifting water. With the harvest there comes a great increase of work for cutting the crops, and carrying and threshing them, for which manual labour and cattle are respectively employed. If the system of hot weather ploughing is adopted, cattle are required for ploughing lands. This accumulation of work occurs at a time when the available supplies of fodder are at their lowest, and the work to be obtained from a cattle at a minimum. With the passing of the hot weather, the grain is threshed and stored and the work tends to diminish, but, with the arrival of the rains, the sowing of Kharif crops and the preparation of the lands throws a new demand on the cattle power available; while, yet another demand develops at the end of

1. The Agricultural Departments sold 23,893 improved ploughs, 44,448 fodder cutters, 3,842 iron cane mills, and about 20,000 other types of better implements to the cultivators.

the rains for the preparation of the land for Rabi crops and sowing. In this seasonal succession of speeds of high, alternating with low, demand, undoubtedly, that demand is severest which arises at the time of the rabi harvest. Clearly, the cultivator who possesses the reserve of power permitting him to thresh his crops, to plough his land, and, in irrigated tracts, to prepare the land for early sown kharif crops, will, at other seasons have a large reserve of power on his hands which, if it be in the form of bullock power means heavy charges for fodder. Mechanical power, if it is to come into favour for agricultural purposes, must, therefore, take the form which will offer relief at this season. The cultivator will then be in a position to keep only the number of cattle necessary to do the work of preparing lands for rabi crops, and such reduction will mean a reduced fodder bill. It will also mean a reduced fuel bill, for the engine will not consume when it is lying idle. To this extent, its adoption will be an appreciable gain, but its capital cost is considerable; therefore, to derive the maximum gain from its use, it is necessary to find profitable use for as long a period as possible. Of the power consuming processes during the rabi-harvest i.e., reaping, threshing, ploughing and preparation of the land, all except the second are unsuited to mechanical treatment, for the intense sub-division of the land renders the use of mechanically driven implements unprofitable.)

The Agricultural Department, Co-operative Societies and Kisan Sabhas should co-operate and co-ordinate their activities with the Rural Development for the purpose. Railways should give concession on imports of farm machinery and rebate should be allowed on the import of iron and steel if utilised for the manufacture of agricultural implements.

Manuring

As regards manure, Dr. Voelcker has cited many instances to show that, while the ryot is aware of the qualities of both farm yard and green manures, he is compelled by poverty

to use his cattle manure for other purposes. The wide use of it in the form of cakes as fuel is highly uneconomical so far as the maintenance of the fertility of the soil is concerned. It has facilitated soil depletion. Rich both in organic and inorganic substances, both in nitrogen and in minerals, farmyard manure is the only manure containing in itself all the constituents of fertility, and its high manurial value is generally recognised by the peasantry; but it suffers both waste and impoverishment from the manner in which the cattle are housed in open unsheltered yards, exposed to sun and rain; from the non-provision of litter to catch and retain the manure; and from the general ignorance of the value of liquid element. Organic manures contain many complex chemical substances, and are usually rich in nitrogen, the essential element in the development of plant food, to the presence of which their manurial value is due. That nitrogen is in a combined form and requires to be decomposed by bacterial action before the nitrogen appears in available form. They contain, in addition, a large amount of material of the nature of carbohydrate; which acts as a medium for bacterial growth, and it is the decomposition of this material which forms humus; and it is to this that the benefits of manures of this class is due. Such manures must be applied a sufficient time before the crop is sown to allow the necessary decomposition to take place. Now, we observe daily in the villages, that

In order that he can utilize to his best the available supply of the only source, it is of utmost importance that he should be taught to conserve it properly. The Agricultural Department has taken upon itself the duty of teaching the cultivator more efficient methods of manure conservation. The proper method of conserving it consists in depositing the cow-dung together with the urine and chaffs etc., into a pit under shade to protect it from the action of sun, rain and winds.

There is another fertiliser available in large quantities which contains very rich manurial value, and its use is sure to increase the yield of land viz, night-soil. The success of the Flemish, German and Japanese system is due in a large measure to its utilization. In Germany and Japan there are vast works turning them into fertilisers. Even in our municipal towns we find that it is usually deposited in the fields where collie flowers are grown because they are so very rich in manure; and there is a vast scope for its adoption: but the religious susceptibilities and prejudices stand in the way of its being utilized. It is very cheap and abundant; and these characteristics coupled with greater yields and higher profits will gradually but undoubtedly overcome this cramping prejudice. Sir F. Nicholson in his "Note on Agriculture in Japan", while speaking of Madras remarks, "In a poor country like Madras, which, over vast areas knows nothing of fish or bone as fertilizers, practises little green manuring except for rice, and poisons itself with the natural fertiliser festering on village sites, its proper use is all important agriculturally and hygienically; properly used, it would be of the highest assistance not merely in the improvement of the soil, but in preventing its degradation to that minimum productivity which, meagre in normal years, disappears entirely in seasonal conditions which a healthy, well-worked and well-nourished soil would successfully resist." These remarks apply equally well to the other parts of the country. Therefore, there should be an intensive and extensive propaganda organised to popularise the use of night-soil as a fertiliser to increase the yield even under the existing system of agricultural

methods. The religious and social institutions and Kisan-sabhas will do well to render this service to the country and thus dis-
abuse the peoples' minds of the false prejudices.

Again, there is available in large quantities another organic manure, which, again, owing to prejudice is not utilized for the purpose of fertilising. Outside every village we find a 'golgotha' where the bones of all the dead animals whiten and decay in ghastly piles. At present this vast amount of phosphatic manure is running to waste. Superphosphate and bone-meal are less readily soluble and require to be weathered before the phosphorous becomes available; and therefore, to derive full benefit, they must be applied before sowing. At present, however, the cultivator does not possess the means to prepare phosphorous from the heaps of bones and, therefore, this presents an additional difficulty in the way of its being properly utilized. However, recently, there has been a move in the right direction, and we find that heaps of bones are collected from the different villages and transported from the mofussil railway stations to places where they can be milled, and then, may be readily available for use but; their high cost still deters the cultivator from using them.

Other mineral manures readily available for the purpose are
salt-petre or sodium nitrate; Ammonium sulphate, which when
converted through a bacterial action, into nitrate is able to yield
the nitrogen required, and calcium cyanaide. The use of artificial
manures, however, is still in its infancy in India, and its rela-
tively high cost militates against its use widely. The Agricul-
tural Departments very early began teaching the advantages of
these manures but their work proved fruitless and disappointing
because they did not keep in view the circumstances of the farmer.
 Lord Mayo recognised as early as 1870 the folly of trying to
 teach the Indian husbandman his own trade by means of steam
 ploughs and ammoniac manure when he wrote, "I do not know
 what is precisely meant by ammoniac manure. If it means
 guano, superphosphate or any other artificial product of that kind
 we might as well ask the people of India to manure their ground

with champagne." (We have remarked elsewhere that we are not to tell ostentatiously the farmer to do things which he has been doing for centuries, and must not ask him to do things which he cannot do, and has no means of doing; because we shall become the laughing-stock of the agriculturist and he will be prone to disregard really useful advice.) Thus, we see, that though there is a great probability for the growth of artificial manures still our farmers cannot use them for their costs are prohibitory. India, however, possesses sufficient substances out of which artificial manures can be manufactured at a low cost and, therefore, we need not despair. An eminent Indian geologist has recently pointed out the occurrence almost in fabulous quantities of gypsum in Kashmere and referred to its possible uses as a soil stimulant. Sulphur is absolutely necessary to plant proteins: and the artificial addition of a gypsum to the soil will confer all the benefits derived from acid phosphates. In Singhbhum region the manufacture of ammonium sulphate and other fertilisers is receiving due attention. Increasing attention is also being paid to the manufacture of guano in the Madras Presidency. The possibility of gypsum as a fertiliser should be tested by the Government and its use encouraged. As it can be got in abundance, its cost of production will be very low and will be within the reach of an ordinary farmer. Developments like these will prevent methods of cultivation from degenerating into a "System of spoliation" and tend to improve the productive powers of the soil. ✓

Then, there is still another kind of manure, i.e., oil-cakes which are very useful as manures, but as India exports annually a large quantity of the oil-seeds produced, it amounts to an export of so much of the fertility of the soil in addition to the oil. (Given the requisite encouragement, there is a vast possibility of a healthy growth of soap and its allied industries and then by stoppage of exports of oil-seeds there would be available a vast supply of cakes for manure enriching the soil, and thus, increasing the yield.) But even under the present circum-

tances, a vast quantity of it, obtained from the village oilman or Teli, is used as food for the cattle; and in some parts of the country they are used for valuable crops like tea and sugarcane. Still there is a vast possibility for obtaining manure from the cakes of Neem oil which is indeed very beneficial to the growth of plants especially in gardening. In fact, a vast quantity of it annually goes to waste. If an industry is organised to crush the Neem seeds there will be available a large quantity of oil for burning and medicinal purposes, while, the cakes will be used as manure. Lastly, we have the system of green-manuring in which a crop is grown merely to be ploughed in and form a manure for the succeeding crop. This is not at all practised nor under the existing circumstances, there is any possibility of its coming into wide use.

Our discussion of various kinds of manures and their possibility of coming into general use points to the conclusion that at present the only source available and tapped to the utmost is farmyard manure; but a vast quantity of it is consumed as fuel in the form of cakes or varatties. Therefore, the real solution of the problem of manure lies in the provision of a large and cheap supply of fuel. For this purpose, there should be a forward policy of afforestation; which will kill two birds with one stone in that firstly, it will provide the cattle with ample fodder, which as we shall see presently, is badly needed; and secondly, it will provide cheap and abundant fuel to the cultivator and thus secure an immense quantity of manure to the soil.

Forests constitute an extraordinary and important national asset and their economic importance to a vast country like ours can hardly be exaggerated. The neglect of her forests has imposed many severe penalties on India; and the process of deforestation has continued for long; but its serious effects have become apparent only under the British Rule leading to a great increase in population. New demands for timber and fuel, the extension of tillage and the increase of herds, the necessity for

constructional timber have caused a fierce onslaught upon the forest areas. As it has been well said, "among the peasant's greatest needs are fire-wood to replace manure; small timber for houses and wood for implements, as well as grazing and fodder for cattle. It has been recognised with increasing clearness that forestry has an important vocation as the hand-maid of agriculture." Forests have also a marked effect on climate and on the maintenance of water supply. "They hold together the fertile surface soil; they store water and dole it out gradually; thus preventing disastrous floods and the formation of ravines. By checking erosion they prevent good soil from being washed into the rivers, and carried away to waste. Forests also increase the direct fertility of the land, being capable of forming rich vegetable mould even from mineral soils. Finally, in India, forests are a valuable asset in the time of famine for they yield vast quantities of fodder—though much of it is of poor quality—and provide edible fruits and roots of which the poor readily avail themselves." Such being the economic importance of forests, and the danger of deforestation being perceived before it was too late, it must be said to the credit of the Government that they have systematically applied themselves to the conservation of forests for more than half a century. Restrictions upon the grazing of cattle, the felling of the trees and the lighting of fires are often resented by the interested classes, though they are necessary for the conservation of the forests. (However, public opinion is being gradually enlisted in the favour of conservation by committees and Panchayats, managing the local small reserves, and research into forest economics is being successfully carried on at the Forest Research Institute of Dehra Dun.) Many of the so-called "jungle woods" can be turned to important uses through research.

To provide alternative fuel and to release the cow-dung for manuring the fields, the waste areas near villages should be planted with trees; fuel reserves should be maintained; and railway freight for the carriage of fuel should be reduced. Mr.

Brayne's schemes for cleanliness in the villages and for conservation of manure and latrine in pits 6 feet deep and 10 to 12 ft. wide in the Gurgaon district should be followed in other places also. In this way human excreta and all rubbish and refuse of the village can be applied in proper form in manuring the fields and increasing the yield of crops. The night soil should be turned into poudrette on the lines of the Nasik municipality by other town authorities for utilisation as manure and the cultivation of leguminous crops in rotation for enriching the soil should be developed. The manufacture of composts from crop residues and other waste organic materials and their use as manures should come into more general use than at present. It will supply the long-felt want of Indian soils for organic matter. The cultivation of green manure crops is increasing in the irrigated areas and to encourage it many provincial governments give concessions. The use of oil cakes especially castor cake is now very common for tobacco and sugarcane. As a result of the efforts of the Agricultural Department and private agencies the use of the artificial fertilisers and nitrogenous organic manures like ammonium sulphate, nitrate of soda, fish manures and bone-meals etc., is increasing and considerable quantities of these are manufactured in India and imported from abroad. In 1936-37 over 80,000 tons of these manures were imported. Their use has been confined to planting industries and irrigated tracts only and therein also the recent depression in agricultural prices has adversely affected their use.

(With the development of the sugar industry on a large scale the possibility of another kind of manure i.e., from molasses is being examined. If the experiment proves successful it will be of benefit to both the sugar manufacturers and the cultivators. Under the auspices of the Imperial Council of Agricultural Research a Fertilizers Committee was constituted in 1930 for advising on problems of manure conservation, use of fertilizers and research in them. Each province has been given a small

grant to collect and correlate data on manurial experiments in its sphere.)

Cattle Problem

Cattle play a most vital and important part in the agricultural and rural economy of India. The chief power used in agriculture is that of the cattle which possess little hauling power. They are not only the chief motive-power used by the peasants, but they are also the most valuable movable property with them. Whether it be for ploughing, or for supplying manure, or for raising water from wells or for threshing grain, or for levelling with the help of the *Patha*, or for carrying produce, or for conveyance, and for driving the cane-crusher and the chaff-cutter etc., or for working the primitive oil mill, the cattle are the principal coadjutors of the farmers. Unlike the western countries, like America and England, where large areas of hundreds of acres are worked by the smallest number of persons with the aid of mechanical power, the entire agricultural work of the country is thus practically effected by bullock, male-buffaloes or man-power. Horses or mules are not utilised for agricultural purposes. Hence, the important part which the cattle play in the agricultural economy of India makes their care and improvement a matter of first rate importance. The cattle are not only the main source of the only kind of manure most widely used, but they are also the only source of milk, butter and ghee etc., so essential for food and health in a country predominantly vegetarian and ridden by the doctrine of *Ahinsa*. Meat-eating is not yet a national habit here, but as suppliers of milk and butter etc., they are greatly in demand. The buffalo is the dairy-animal of the country and the best ghee and butter producer. As it is the bullock which draws the plough, pulls the cart, threshes the corn, so the cow, being the mother of the indispensable bullock and the producer of several articles of food like milk, which is one of the best all-round foods for children and vegetarians Nature has provided, has been made the

object of so much veneration in India and so many social customs have been designed to multiply the species.²

In spite of this fundamental importance of the cattle to the country, it is a pity that the majority of the bovine class of live-stock are ill-fed, ill-kept and extremely poor and emaciated. Majority of them are under-sized and under-nourished and hence in-efficient. The cattle population is excessive. Egypt has only 25 cattle per 100 acres of cultivated land; Holland has 38; whereas India has 67 heads of cattle per 100 acres of net cropped area. According to the Director of the I. V. R. I. Munkteshwar, the latest available Census figures show that India with an area of 1,800,000 sq. miles has 300 m. animals excluding pigs and poultry and of this nearly 220 m. are in British India. The total number of the bovine class of live stock i.e. bullocks and buffaloes etc. in British India is 154 millions and the value of the total live-stock and animal products is estimated at Rs. 1,300 crores in the post-depression period. Before the depression the annual value of live-stock and animal products was estimated in 1929 at more than Rs. 2,000 crores. The value of the live-stock industry is slightly greater than that of the cash crops of the country and that shows the economic possibility of an organised dairy industry. The U. S. A. with an area of over 3,000,000 sq. miles contains only 140 m. animals excluding pigs and poultry. It is this excessive animal population with a superfluity which is the live-stock problem of the country; or, as the Royal Agricultural Commission pointed out the real problem in India is not of *more* cattle but of *better* cattle. Lack of an organised breeding without an adequate attention being devoted to the problem of fodder supply has been responsible for this deplorable condition and to make up the low efficiency and productivity of the existing stock more and more cattle are bred. The increased numbers with reduced grazing land, and more arable areas for feeding the increasing population

of human beings, cause the fodder supply to depress and lead to poverty in cows. In fact, "India is being eaten up by her animals." In the words of Dr. R. K. Mukerji : "For the security and stability of Indian agriculture it is not merely the balance of soil, vegetation and water which should be maintained, but a working biologic balance must also be established. India's vast, superfluous, and uneconomical cattle population has contributed to the destruction of the village forests and pastures, to a heavy drain on man's food supply, to the multiplication of ticks and flies and to the invasion of crop lands, orchards and huts by rodents where their food has run short due to over-grazing by the livestock." The only way out of this vicious circle is more scientific breeding and increased fodder cultivation.

We have now to consider the possibility of developing that increase of available power which is necessary if agricultural development is to proceed. Two classes of improved methods suggest themselves. We may increase the value of our power unit by improving the class of cattle or the substitution of mechanical power in the form of a steam or oil engine for animal power. To begin with, the problem in regard to cattle improvement is two fold; the preservation of the existing cattle both from disease and famine, and secondly, the improvement of the breed of cattle for the supply of improved stock. Unfortunately very considerable numbers of these cattle are maintained at an actual loss, for they are useless both for draught and dairying purposes. Such useless cattle are destroyed by the English farmer. But the question here is not one of pure economics, for the cow is held in universal veneration among the Hindus, and therefore it is not possible to eliminate the unfit and wasteful beasts. A good deal of money is spent on the maintenance of various Go-shalas and Pinjarapoles for invalid and unfit cows and bullocks. However, the two lines of advance indicated above can be pursued without offending in the least the religious susceptibilities of even the most orthodox.

The increase in yield may be brought about by increasing the number of ploughings which even the present unit of power can do by working for longer hours, making due allowance for fatigue. The limit set by fatigue might be removed by increasing the head of cattle kept to work the particular area. The smaller power unit, however, cannot make good the deficiency by working longer periods nor will increasing the number of units avail. The limit here is an economic one. An increase in the number of cattle means increased cost of purchase and an enhanced fodder bill, and it may be that the extra cost of purchase and maintenance exceeds the value of increased produce. Now let us look a bit more closely into the available source of motive power. The bullock is a living organism, and as such, is subject to his environment. He cannot work continuously for hours together, and he will develop his full power only when well-nourished and carefully tended at all stages of his growth. Can it be said that the country-side cattle are so tended? Hardly with truth. Generally speaking the cultivator does not grow any fodder crops like lucerne etc. but lets loose his cattle to pick up grass across the fields or the roadside during the wet season and gives them the stubble and the straw of the cereal crops. During the hot season the cattle are commonly turned out to gather a precarious subsistence from the withered growth that remains in the parched fields and waste lands and in times of famines their condition becomes deplorable. This seasonal alternation of plenty and famine is not at all calculated to build up a robust body, and the ill effects are particularly marked in the young stock, for starvation in the younger stages leads to constitutional weakness which may persist through life. Again, young stocks are often worked at too early an age leading to the comparatively low efficiency of the average bullock as a power unit. The insufficiency of the food supply, even in a normal year, will be apparent to any one of us, who take the trouble to note the condition of the animals at that season of the year, when we find herds of cattle roaming in the hot weather over the dried up

wastes and bare fields picking up a bare subsistence. Mr. Leake writes in this connection that during the rains there is an abundance of green fodder, both in the natural growth of uncultivated areas and in such crops as *chari* grown to supply fodder. With the cessation of the rains and the coming of the cold weather natural growth ceases and the fodder crops ripen off. Fodder is now limited to the dry stalks of jowar and maize and to the *bhusa* (in the silo-pit) produced in the cold weather cereals, to which must be added the withered grasses of the waste lands. Grains and pulses are little used as cattle food, nor is the use of cakes, appreciably adopted. On these fodders, having small oil nutrient value, eked out with such little natural grazing as is available, the cattle have to struggle along till the succeeding rain brings forth a new supply. Moreover, within this period falls the season of maximum demand for power for agricultural purposes for threshing, ploughing and carrying loads. Thus, in a year of famine, the beasts die by hundreds, and, the survivors become inefficient workers for some time, especially the young stocks. No sufficient excess of fodder is produced in good years, and its bulky nature prevents the importation of appreciable supplies, even if, external resources were available. Besides this, the cattle are generally ill-kept without any shed. The provision of proper food and shelter, therefore, forms the first step in any programme of the improvement of cattle.

The great reduction of numbers in the stock of working cattle through famine and diseases and a diminution in the working capacity of the survivors is fraught with grave dangers. The land cannot be efficiently ploughed for the succeeding crop and a reduced out-turn must result, because some of the farmers have to contract loans to replace the lost cattle, while others will be dependent on half-starved cattle.

The *fodder problem* is a difficult one and is now assuming increasing importance on account of the restriction of grazing areas which has resulted from the rapid extension of arable land

due to increased population and the stricter conservation of jungles as forest reserve. As early as March 1, 1833, the Government of India in a resolution emphasized the great usefulness of fodder reserves during drought. The various Famine Commissions, too, have looked with anxiety at the absence of due provision of fodder even in normal times, while, during the abnormal famine seasons, the cattle mortality caused thereby has been very severe. The Agricultural Department is indirectly doing much through increasing straw yields. The difficulties in the way of an extension of fodder cultivation are that it requires fairly good land, some irrigation water and some capital, all of which can be turned to more profitable account by the cultivation of food grains or of the more valuable crops. Often, the enterprising cultivator, who starts on the new lines of development, does not find favour with the Mahajan because a fodder crop does not benefit him directly. Nor is it possible to revert to the conditions which formerly existed and thus increase the waste lands available for grazing. Such an increase can be effected only by the relinquishment of land under the plough, while the economic pressure due to increasing population is directed to a still further diminution in the area of uncultivated land. The solution of the problem is of vital importance for the full agricultural progress of the country, and yet, it is not possible to find any ready solution. However, the problem is not a new one, it has arisen in all countries where the pressure on the land has led to a partial or complete absorption of grazing wastes. In England it has been solved by the enclosure of common lands where the capacity of importing food-stuffs at a lower rate than they can be produced in the country itself, combined with the higher money value of live stock, has rendered it sound economically. In Egypt where the population is exceedingly dense and grazing land practically non-existent, and in which the cattle are approximately put to the same uses, the problem has been solved through stall-feeding. The necessary fodder is grown as a rotation with maize, cotton, wheat, barely

and other crops ; and this purely fodder crop is supplemented by the *bhusa* from cereals and by the stalks of, as well as green, maize, which is widely grown. Therefore, we can conclude, that if full power is to be obtained from the cattle raised, stall-feeding must develop as a custom in India like other countries. Even if it is adopted for the young stock only, the effect would be appreciable. But here again as we have seen above, we are met with an economic difficulty. Stall-feeding implies the cultivation of fodder crops which will be grown only when the economic value of breeding and rearing cattle and maintaining a robust stock for dairying and draught is fully appreciated. It depends further on the existence of a suitable crop which will pay better than the existing crops. We cannot conceive, for instance, that the area under jowar will largely increase at the expense of other crops; because, jowar yields a produce at a time when fodder is plentiful; the value is regulated by the demand and only the assurance of an obvious and relatively high price would stimulate it. It is clear, therefore, that the fodder crop which will pay best will be one which gives a return when the fodder supplies are at their lowest i. e. in the hot weather until the rains bring on natural vegetation and the new rain crops. This is a season of intense heat and drought in which no crop will grow without artificial watering. The water supply is thus the limiting factor ; and, where water is available, the growth of lucerne is frequently, though by no means commonly, undertaken. In some parts of the country, owing to the smallness of the individual holding, even a small area of fodder makes an appreciable difference to the land available for the production of the crops required to produce the essential needs of the cultivator who can, therefore, ill afford to set aside even a small portion of his holding for fodder crops. The economic forces at work here do not allow the adoption of stall-feeding even if water in sufficient supply is available. But in the greater part of the country, the problem of fodder supply is closely dependent on the problem of water supply, and the

solution of the former will only be achieved when the latter has been solved. Egypt has been able to solve it only because of the wonderful system of irrigation developed there. We have seen above how the question of water supply is being successfully tackled here, and can hope, that gradually with the solution of it, the problem of fodder supply will also be solved. However, the lesser profits derivable from cattle-raising as compared with crop-growing accounts for the neglect of cattle-breeding in India; and until the price of draught cattle rises to the cost of production in the arable areas, things can hardly be expected to adjust themselves. It is gratifying to note that interest in dairy farming and in cattle breeding is fortunately increasing; and the high prices which good draught and milch cattle fetch now-a-days, the growing demand for Indian cattle of the best quality in foreign countries, the abnormal rise in price of dairy products, and the need of the cultivator himself for strong cattle, all indicate the rearing of cattle for dairying and draught, as the best solution of the economic problem involved.

The Agricultural Departments are putting more lands under fodder crops. A scheme initiated by Mr. Keatinge for storing grass, and dried jowar stalks in portable form in good years for use in periods of scarcity has been successful, and during a recent fodder famine in Ahmednagar, 3,50,000 lbs. of first-class dry fodder were issued from Kopergaon Depot. Famine camps for cattle had also been organised in Bombay. The results of research in this direction are of primary importance for a considerable percentage of the country's live-stock is underfed, which disadvantage, combined with poor stock and close inbreeding, places it under a serious handicap.

Equally important is the *preservation of the live-stock from contagious and local diseases*. Sporadic outbreaks of disease, particularly riderpest, blackquarter, haemorrhagic septicaemia, foot and mouth disease, anthrax, Surra etc., levy a heavy toll on the agricultural stock. The progress in controlling these diseases

is very slow here for ignorance, established customs and deep-seated prejudices increase at every turn the difficulties of the Civil Veterinary Department (1889) which has set itself seriously to the task of combating cattle diseases in British India and major states. There are over a thousand Veterinary Hospitals and Dispensaries at work throughout the country in which about 3 to 4 million cases are now annually treated. They are usually maintained by District Boards with financial aids for the staff from the Government. Fortunately, the general public is now beginning to evince growing interest in the matter, and, the building of a Veterinary Hospital in Bombay recently was assisted by popular subscription, while in other provinces substantial help is received from the public. The Indian Veterinary Service has been reorganised after the War. The Imperial Institute of Veterinary Research at Muktesar, formerly known as the Imperial Bacteriological Laboratory, supplying munitions for the campaign against contagious cattle diseases, distributes millions of doses of sera and vaccine for inoculation every year. Besides the production of these essential commodities, the institution carries on researches into cattle diseases of various kinds. Systematic tests are continued in the endeavour to control important diseases and to produce immunity through preventive inoculation. It also arranges for the instruction of officers selected from the provincial branches of the I. V. S. with a view to their promotion to the Imperial grade. Shorter courses are available for the officers of the I. V. S. and of the loyal Army Veterinary Corps in India. Further, arrangements are made to impart training in the rudiments of laboratory methods of disease investigation to selected veterinary subordinates from the provinces. These courses have become popular, several provincial Governments taking full advantage of the facilities.

It was for veterinary science that the Government of India set up the first central research laboratory in 1890 at Poona under Dr. A. Lingard noted for his work on surra and anthrax. Finding that rinderpest, which is responsible for the heaviest

mortality among the live-stock, was more important than anthrax and that the climate of Poona was unsuitable for work on certain bacteria, the Institute was shifted to Mukteshwar in the Kumaon division of the United Provinces in 1893. In 1897 two German bacteriologists advised the institute on methods of prevention of rinderpest and since 1899 the institute has been distributing a steadily increasing quantity of anti-rinderpest serum for inoculation. The goat-virus vaccine for rinderpest, Naganol for surra, 'spore' vaccine for anthrax are some of the important discoveries made by research in live-stock diseases at the laboratory. In 1913 a sub-station at Izatnagar was started to separate the production side from research. The institute has been recently expanded considerably with increased staff and buildings and new research sections, like poultry research and animal nutrition, which were opened in 1939 by Lord Linlithgow. Serum institutes have also been established now at Madras and Bangalore for the manufacture of biological products. The Imperial Research Institute today is one of the largest veterinary research centres in the world. The original bacteriological laboratory has grown into a large estate with its own farms, cattle kraals, electrical power-house, pumping stations, hospital and dairy, its own school for the children of employees, co-operative shop and two clubs. Beside the central institute a provincial institute also exists at Bombay, Calcutta, Lahore, Madras, and Patna. The Animal Nutrition section at Bangalore has been carrying on valuable research on nutrition of cattle and on composition of food-stuffs. The introduction of disease into India from outside is controlled by the application of the Live-stock Importation Act at the ports for landing animals. Indian poultry is also protected against contagious diseases.

Yet another aspect of the cattle problem arises from the fact that cattle are organisms and bear the attributes of such. Chief among the considerations that follow from this fact is, that the male is as important as the female in determining the character of the off-spring. We have seen the necessity for

improved stock. To achieve this object the breed of cattle should be improved by the establishment of studs, by cross-breeding by selected bulls and by the discarding of the promiscuous breeding in the villages obtaining today. We have seen that lesser profits derivable from cattle raising than from crop-growing accounts for the neglect of cattle breeding both for draught and dairy purposes in India. Provision of a suitable bull is of vital importance yet the whole system of the country, which leaves the entire service to chance, is opposed to any improvement desired. There is a vast field for improvement in the breeds of cattle based on pedigree stock in which equal attention is given to the bull and the cow. In the western countries, the raising of pedigree stock is undertaken as an industry; and a good English pedigree bull will fetch as much as Rs. 30,000 because, there the influence of the bull in forming the young stock is fully appreciated. The improvement of the working cattle of the country is not the only thing that is needed, because, the value of cattle lies also in the cow as a supplier of milk and other dairy products. Here too, considerable scope for improvement exists, and here again, the importance of the bull must not be overlooked, for the entirely female character of milking capacity is largely inherited through the male parent. There is thus ample scope for the improvement of the type of working cattle, and for the evolution of one which is capable of developing the larger power unit desired.

Undoubtedly, there are some improved breeds of cattle which are very good both as working cattle and suppliers of milk. Such are the Hisar, Dhanni, Haryana, Sahiwal, Kosi, Hansi, Montgomery etc., but owing to climatic conditions, combined to a great extent, with the ignorance and apathy peculiar to indigenous cattle-breeding, neglect, starvation, inbreeding, and the usual anti-castration attitude, there has been a general tendency to deterioration. There is also simultaneously an increasing demand for the pure types and a proportionately reduced supply, almost extinguishing some of the better breeds. But these

improved breeds have been confined to certain tracts and not more universally used because of economic reasons. The first essential is capital to buy the cattle and necessary equipment, and few cultivators have the requisite capital. The first slowness of progress in this direction is therefore due largely to the lack of capital, and is no proof that, if capital were forthcoming, the adoption of a higher power unit would not be profitable. Improving the breed, however, can do very little to raise the power capacity of the stock as long as the conditions under which the stock has to live remain adverse. Therefore, the fodder supply remains the essential factor of the situation.

Crop production being more valuable than dairying, cattle breeding is generally relegated to those areas where no valuable crops can be grown. Fodder crops like jowar are grown on the poorest soil with no manuring. Fortunately, however, interest in dairying and in *cattle-breeding* is increasing, and most of the Provinces and the states realize the importance of these matters. Good progress is being made in establishing pure herds of the milch breeds and in evolving methods for increasing the fodder supply. The Imperial Department of Agriculture maintains a Dairy Expert, and the Imperial Institutes of Animal Husbandry and Dairying at Bangalore and Wellington, and the Imperial Cattle breeding Farm at Karnal under the administrative control of the Agricultural Adviser to the Government of India. On these farms the best indigenous milch breeds are being improved by better feeding and careful selection, and by cross-breeding. The cross-bred breeds have far surpassed the yields of the best indigenous animals; but for draught purposes the latter seems still superior to the former; and hence, increased attention is now being devoted to the improvement of the indigenous breeds to evolve the best possible dual-purpose animal. The Board of Agriculture had drawn up a new scheme for investigation into the cattle-breeding and dairying in 1916. A Cattle Bureau for all India has been established which con-

trols pedigree records and encourages the formation of pedigree herds. Standing Committees of the Imperial council of Agricultural Research on breeding, nutrition and dairying have been formed to deal with these matters. An extensive propaganda should be carried on through Panchayats and local sabhas for the improvement of the breed of cattle and for emphasizing its necessity and advantages in the rural areas. The District Boards can very successfully organise lectures through lantern slides and in other ways, and thus, popularise the rearing of pedigree stocks and the importance of the dairying industry to the cultivator. An interesting recent experiment has demonstrated the possibility of sterilising and transporting milk from rural areas to urban centres. An upto-date sterilising plant has been set up on the Karnal farm, and milk is now being successfully carried over 1,000 miles away to Calcutta. Should the experiment prove successful, it will open a new vista of great possibilities for the Dairy Industry in India, for at present milk is three times as expensive in larger towns as in rural areas.

A number of cattle-breeding and dairy-farms have been established in practically all the provinces and big states to breed and rear pedigree bulls and place them out on a premium system to suitable villages. But the number of approved and subsidised bulls in service is still very small in comparison with the numbers of cattle to be improved, and without systematic and substantial government subsidies to private breeders for producing the required numbers of improved sires it will not be possible to improve the breeds of cattle on better lands in the near future. The exclusion of "scrub" bulls through the premium bull system (issuing the pedigree bulls from the government cattle farms to villages which undertake to maintain good strains of cows etc. by avoiding scrub bulls and carry on business in pedigree stocks) in many tracts has led to a good deal of cattle improvement and the "gift" bull scheme of His Excellency the Viceroy and the Simla Cattle Conference of 1937 have

given an impetus to cattle improvement and breeding which are now receiving considerable attention in all the provinces and states. The land-lords can render a very great service to the countryside if they take kindly to rearing and breeding of approved pedigree stocks for distribution and free service to their tenants in the villages. Annual cattle shows, fairs and exhibitions are organised in the various tracts and prizes are awarded to encourage improved breeding. Herd registers for improved breeds are maintained for records. For the castration of scrub bulls, the *deski* mulling method is being replaced by the Burdizzo method evolved by the Veterinary Department, and in Bombay the Castration Act of 1933 to prevent promiscuous breeding by undesirable male stock has been applied to 70 villages. The Bombay Expert Cattle Committee's report on the improvement of cattle and supply of milk to rural areas is under consideration. It is being realised that mixed farming and cattle-breeding will place the peasant in a sound economic position.

A number of cattle-breeding co-operative societies maintain breeding bulls in the various tracts. There were one central breeding society at Rae Bareilly and 14 primaries at Meerut, Bulandshahr and Etawah in United Provinces in 1938-39. There is an All-India Agricultural and Cattle Improvement Society for collecting statistics regarding cattle and agriculture, for devising ways and means of increasing the number of good cattle, schemes for the cultivation of fodder crops and expansion of free pasture etc. It has succeeded in getting the Anti-Phooka Act passed by both the Provincial and Central Legislatures.

There were 647 approved bulls at the studs in the districts of Aligarh, Bulandshahr, Meerut, Muzaffarnagar, and Pertapgarh, 26 buffalo bulls and 80 stallions at the end of 1939-40 and the subsidised scheme introduced in Etawah worked satisfactorily.

Agriculturist—Another difficulty is that as a worker the ryot is not very efficient or energetic. If he gets a good

price for his crop he works less or hires labour; he is necessarily idle for long periods of the year, and therefore, he is an intermittent cultivator owing to the fact that he has only a busy period of growing or reaping time. If he could fill in the intermediary period by some employment or by cattle rearing, much moral force would be gained by steady instead of intermittent labour, but there is no accommodation for cattle in the Indian villages as at present organised. But the real difficulty in the way of progress is the lack of funds to launch all these schemes simultaneously without which no real and substantial reform can be introduced. Scientific agriculture, therefore is expensive and entails additional taxation which the poor peasantry cannot afford. Yet India is a country of infinite possibilities and in the march towards progress she need not despair because she is moving slowly. The problem of the uneconomic holdings and the inefficient cultivation of the peasant is not a new thing to India. Every European country has had to face it at one or another time of its history. The interesting thing is to find that the same problems of enclosure and the formation of economic holdings is as important in India as it was in England. She solved her problems of agriculture by the consolidation of holdings, enclosure of common lands, and by the introduction of scientific methods of cultivation. But like other European countries it was obtained at a very heavy price through a revolution with untold misery and sufferings to millions of people. But as India has started rather late in the race for material prosperity she would profit by the experience of other countries and would not create pit-falls.

Sometimes, great capital is made of the inefficiency of the Indian farmer and it has become a fashion with certain foreign as well as native writers to denounce him for his conservatism, ignorance and inefficiency and he is often accused of a profound distrust and apathy towards new methods. But as we have seen before, this charge is not well founded. Prof. Rushbrook Williams in his 'India' in 1924-25, remarks in this connection as

follows : "It has been said that the Indian Agriculturist is very suspicious of improvements ; but the experience of the last few years seems to indicate that his conservatism is generally that of the practical farmer, who requires good reasons for departing from established practices. When the success of improved methods can be clearly demonstrated, they spread with remarkable rapidity. Hence, in many places, the cultivator, despite his lack of education, is beginning to look upon the agricultural expert as a friend and guide." As to his inefficiency, Dr. H. H. Mann has recorded the results of some ploughing tests. In harvesting it has been said that it takes 10 men or 10 or 12 women to reap an acre a day. Dr. G. Slater, in his "Some South Indian villages", remarks, "From a comparison of results in rearing and ploughing, it might be estimated roughly that a week's work by a ryot or coolie in the Madras Presidency is about equal to a day's work by a British agricultural labourer if unaided by machinery". As, in the Madras Presidency on one crop land the agriculturist works for only about five months in the year, and on two crop land only for about eight months, it would follow that on the average the Indian agriculturist during a year does only what would on British standards be one month's work. "But it must be remembered, as Dr. Pillai very pertinently remarks that the results in ploughing differ according to the nature of the soil and of the implements employed ; and that the Indian agricultural worker is no more to be compared to the English worker than his weak and emaciated bullocks to the Clydesdales. There are the differences in diet, climate and physical vigour to be taken into account, nor does the Indian yet possess the equipment of improved implements and machinery which have so largely increased the productive power of human labour elsewhere.

But there can be no better testimony to the efficiency of the Indian peasant than that of an eminent and expert agricultural chemist like Dr. Voelcker. In his memorable "Report on the

Improvement of Indian Agriculture", he writes, "On one point there can be no question that the ideas generally entertained in England, and often given expression to even in India, that Indian agriculture is, as a whole, primitive and backward, and little has been done to try and remedy it, are altogether erroneous. It is true that, no matter what statement may be made, as deduced from the agriculture of one part, it may be directly contradicted by reference to the practice of another part; yet the conviction has forced itself upon me that, taking together, and more especially considering the conditions under which Indian crops are grown, they are wonderfully good. At his best the Indian cultivator is quite as good and in some respects the superior of the British farmers, whilst at his worst it can only be said that this state is brought about largely by an absence of facilities for improvement which is probably unequalled in any other country, and that the peasant will struggle on patiently and uncomplainingly in the face of difficulties in a way that no one else would.

"To take the ordinary acts of husbandry, no where would one find better instances of keeping land scrupulously free of weeds, of ingenuity in device of water raising appliances, of knowledge of soils and their capabilities as well as of the exact time to sow and to reap, as one would in Indian agriculture, and this not at its best alone, but at its ordinary level. It is wonderful, too how much is known of rotation, the system of mixed crops, and of following. Certain it is that I, at least, have never seen a more perfect picture of careful cultivation, combined with hard labour, perseverance and fertility of resource, than I have seen at many of the halting-places in my tour."

"This," says Mr. Crooke in 'The North-Western Provinces of India', 'is indeed high praise from a very competent authority, but no one who is familiar with the best types of Indian farming, the broad style of the Western Jat, the more minute methods of the Eastern Kurmi, will hold it to be undeserved. At the same time, there is plenty of slovenly, indifferent

husbandry among Brahmans who are too proud to touch a plough, or Gujars, whose proper business is cattle-rearing, combined with stealing their neighbour's beasts.

There are two stock charges which are commonly laid against the Indian farmer, both of which are to a large degree undeserved. One is his so called stupid reverence for traditional methods; the other, that he will only scratch the surface instead of properly ploughing his field.

First, as to his caution and lack of enterprise, it is true that an appeal to the customs of his ancestors never fails to impress him; but, on the other hand, his methods are based on an amount of inherited experience which few European farmers possess, and in the absence of books his practice is regulated by tradition, and a mass of saws and rural rhymes which are ever on his lips. He is cautious but caution is enforced for him by the conditions under which he lives. The climate is always rigorous, and often very uncertain. He is dependent on the amount and timeliness of the annual rainfall, which in many parts of the country is very precarious. His crop is exposed to many disasters; a day or two of fierce sunshine, a few hours of drenching rain, frost and hail, locusts, and many other forms of insect life or blight, about of fever attacking him at some critical time, murrain, which is endemic in the land, serging his plough cattle. And when the crop is ripe, a night snatched, for rest may let in thief, the wild boar, the antelope or one morning of neglect may set the green parrots tearing down the ears. Such are some of the many risks to which he is exposed. His capital is narrow in the extreme, and he is often obliged to borrow his seed grain. A man like this dares not make experiments. Life is much too serious to permit him to leave any thing to chance. Still less can he afford to listen to the ill-instructed censors who presume to criticise his methods when they should be at school themselves.

'It is again a mistake to say that the cultivator is absolutely destitute of enterprise and opposed to all improvement. In fact, he is quite ready to cultivate new staples, if they suit his land and modes of tillage, and are likely to be profitable. Thus, during the American war he turned his attention to cotton, and in quite recent times he has largely extended the culture of crops, like sugar, potatoes, indigo, and opium, the advantages of which have been made apparent to him.

'It is true that he has adopted, on an extensive scale, only one modern machine—the iron roller sugar-mill; but, as regards most of the other machines which a well-meaning but ill-instructed zeal has endeavoured to force upon him, he can show reasonable grounds for his disapproval. They are in some cases too expensive for his narrow means, too intricate, and incapable of repair by the unskilled village artisan. Their object is often to save labour, an important gain to a farmer in the Western States, but unnecessary here, where labour is a drag on the market; or, like the plough they offend the first principles of the science which he has received from the wisdom of his ancestors. He looks on a modern threshing machine or scarifier with amazement, but without any enthusiasm. They are inventions, like the engine on the railway, entirely beyond his practical experience, suitable enough for wealthy nabobs who can afford to buy and work them, but useless to a poor man like himself.

'And even in his affection for his ancient plough, which is still only one stage ahead of the stake with which the savage scratches up the soil, he is not without some reason on his side. Any thing heavier will be beyond the strength of his half-starved cattle; anything that goes deeper and turns over the clods equally offends him. It may bring sterile sand or clay to the surface; the damp slice turned over and exposed to the power of the relentless sun gets baked like a brick, and it is beyond his power to pulverize it. It will not give him the fine tilth which absorbs every drop of the precious dew or other moisture falling upon

it; it may bury the noxious weeds instead of bringing them to the surface where they can be collected and burnt. But his great complaint is that it widens the area to be manured. His present scanty supply barely suffices to fertilize the thin topmost layer of the upper soil. What will become of it, he thinks, when a foot or more of the subsoil, which has never been aerated or manured, is suddenly brought to the surface? Arguments such as these may seem crude and meaningless to the capitalist farmer with ample means, abundance of manure, and haulage power at his disposal; but they are very real and forcible to the peasant, whose resources are extremely limited.

"Dr. Voelcker realizes this" when he writes "I cannot help suspecting that the system of shallow ploughing, as practised by the native and his aversion to ploughs that turn over a broad slice and form a wide furrow, may have something to do with this matter of the retention of moisture, and that the effect of deep ploughing would too generally be to lose the very moisture the cultivator so jealously treasures."

All this was written during the nineties of the last century, but it remains substantially true even today. Since then, writers like these have been criticised, on the ground that by lending their authority to the cultivator's own belief that he knew all that was worth knowing about his art they have somewhat retarded the pace of agricultural development by diverting the public attention away from the obvious defects of Indian agriculture. Lord Fraser in his 'India under Curzon and After' remarks, "The comfortable gospel expounded by Dr. Voelcker had checked agricultural development, though such a result was very far from his intention." However, it must be remembered that all these writers were fully alive to the shortcomings of Indian agriculture and persistently advocated the improvement of tillage and culture in general by the introduction of the methods obtaining in the more efficiently cultivated regions into the more backward tracts. Thus, we see

that so far as unscientific agriculture is concerned, the cultivator has nothing to learn, while, the adoption of scientific agriculture is wholly beyond his means.

None-the-less, there is much room for improvement even under the present conditions; and it is believed that improved methods of cultivation will increase the yield by 15 to 20%. A possible line of development seems to be *co-operative farming*. But here the improvement will be slow on account of economic and religious obstacles. "The collectivist farm, which is the high water-mark of agricultural co-operation in Europe, will not be congenial to the Indian soil where intensive agriculture and private property are indelible features. Where new estates are purchased, large farms are rented, the collectivist principles might be applied with the tenants and field labourers employed as before, wages paid and the produce pooled. In irrigated and heavy land, as the rice-fields of Malabar and Travancore, where the expert and the machine are most useful, the collective farm might be a great success, but it would have no chance in a Himalayan valley, or a hill region, or in the plains where there is an elaborate rotation of crops. On the other hand, the co-operative farm on individualistic principles, which has been introduced into Ireland, Serbia, and Rumania, will suit better the traditions of Indian rural communalism working with the village organisations and responding to the India's profound desire for prosperity."*

*R. N. Mukerji : *Ground work of Economics*.

CHAPTER XIII

COTTAGE INDUSTRIES

The small, scattered and uneconomic holdings of the cultivators in India prevent them from being fully occupied throughout the year with agricultural work. This is due to the absence of suitable subsidiary industries which is a source of great weakness to the small holders. Caste prejudices preclude the adoption of weaving, pottery, carpentry, oil-pressing, laundry work, tanning, vegetable farming, fishing, poultry-farming, bee-keeping or silk-worm culture etc. by the high caste villagers. Moreover, many of these ancillary industries are not remunerative under the existing conditions of transport and marketing facilities. The seasonal character of agriculture, therefore, leads to an enormous waste of labour which has to live in enforced idleness for a number of months. This period of agricultural unemployment or under-employment varies from one part of the country to the other. According to Dr. R. K. Mukerji the peasant in northern India, outside the more intensively cultivated areas, is occupied for not more than 200 days, whereas, in those parts where irrigation facilities are not available, he remains idle for a longer period which extends to the whole of the agricultural season in years of deficient or irregular rainfall. In the well-irrigated districts the employment is more continuous than in the dry canal lands or Terai. Further, a holder's family with an undersized holding cannot be employed fully in the busy agricultural season, and in the slack season it can find employment for barely one or two hours a day on the farm. Dr. Slater has computed that, taking south India as a whole, the cultivator is occupied only for five twelfths of his possible working time. According to Mr. Jack, the cultivator in Bengal, when he does not grow jute, remains idle for nine months, and if he grows both jute and rice, he has

an additional six weeks' work in July and August. Again, according to Keatinge, there are only 180 to 190 working days in the Bombay Deccan, whereas according to Calvert, the working days of an average cultivator in the Punjab do not constitute more than about 150 days' full labour. The Royal Agricultural Commission estimated that there is no work for two to four months, and the U. P. Banking Enquiry Committee estimated that the cultivator is engaged for not more than 200 days.

Most of this spare time is spent in idle gossip, litigation and marriage and songs. Therefore, if the cultivator's economic position is to be strengthened he must be frugal and industrious and he must have a second string to his bow. Japan, France, Germany, and Italy etc. have all their rural industries. Moreover, in England and other western countries, mixed farming keeps the agriculturists occupied throughout the year and dairying, pig-raising, and poultry-farming etc. are usually added to crop production. The problem in India is to find out such rural and cottage industries as can be undertaken by the ryot profitably without any encroachment upon his husbandry and can be performed by the unskilled manual labour of himself and his family with the help of the meagre capital that he possesses, and thus, to restore a balance in his otherwise precarious and weak economic position. The grinding poverty and growing burden of indebtedness in the midst of good administration and modern means of communication and transport have drawn a pointed attention to the economic needs of the peasants. The laudable efforts of the All-India Village Industries Association since 1934 and the rural reconstruction and village uplift programme of the popular ministries have focussed the attention of the country on the provision and development of suitable rural and cottage industries, and the revival of the old ones.

We have seen in an earlier chapter how before the era of the railway and the steamship there were a number of very flourishing rural and urban cottage industries throughout the

country. The handicraft industries, however, began to decline by the beginning of the eighteenth century and their decay became very rapid by the middle of the nineteenth century. There were various causes of this decay which have been discussed in detail in Chapter III (p. 32-36) In spite of their decline cottage industries in various provinces still employ a large number of people. India is still a land of small cottage industries and the small holdings enhance their importance in our industrial economy.

In the words of the National Planning Committee, "A vast mass of the people, especially those resident in rural areas, are unable to procure a sufficiency of food, clothing, housing and other bare requirements of a healthy, efficient, and decent living; and a large proportion of them are in a state of constant want, semi-starvation, enforced idleness and economic insecurity. While other means of improving the economic conditions of the rural masses, such as improvement of agriculture, extension of irrigation and other means of extensive cultivation, vegetable and fruit growing, etc.; provision of public utilities and social services in rural areas, such as: medical and educational facilities, transport services, water supply etc.; and state programmes of providing roads, irrigation facilities, and other forms of capital equipment, will, if vigorously pursued, lead to a considerable amelioration in rural conditions, these measures will, in the nature of things, take time to materialise. The revival and expansion of old, and the introduction of new, cottage and rural industries will be an important and indispensable means of rehabilitating the villages and providing adequate and suitable employment to the people in the villages and ensuring to them a satisfactory level of income and resources.

"The importance of cottage and rural industries for improving the economic life of the large masses of the rural population arises from various advantages which cottage industries possess, such as :

✓ (i) employment in the natural setting of the worker's

own place of habitation combined with numerous physical, moral, material and other benefits that go with such employment;

- ✓ (ii) finding means of livelihood for the largest number of persons;
- ✓ (iii) offering opportunities for profitable employment and development of inherent talent and aptitude in occupations which should be congenial to them;
- ✓ (iv) the opportunities of following more than one vocation for means of livelihood, particularly subsidiary occupations for the cultivating classes;
- ✓ (v) the comparatively lower cost of living for a similar standard in rural areas than in urban areas;
- ✓ (vi) the increased employment in rural areas leading to spreading over of purchasing power which is confined to urban areas at present.

In determining the respective scope of cottage and rural industries on the one hand, and large-scale mechanised industries on the other, there shall be an examination by the Planning authority of the relative economic and social value of the two methods of production, taking into consideration among other aspects:

- (i) the possibilities for extending employment and absorbing the unemployed;
- (ii) the possibility of substantially raising the standard of life of the masses;
- (iii) equitable distribution of the existing national income and wealth so as to assure a proper standard of consumption;
- (iv) economic and social security;
- (v) reactions on the health, freedom, initiative, character and culture of the people."

Similarly, the Bihar Mechanical Industries Committee declare that the immediate solution for the chronic poverty of the villages lies in the development of various small and cottage industries. Their revival will mean an extra income for the agriculturists, will give employment to the educated unemployed; increase Government revenue, maintain and improve the standard of old manual craftsmanship, improve the quality of the rural artisan, establish contact between the rural and urban areas and, in general, will lead to social contentment on which alone the economic and political structure of the state can be securely based. Besides providing alternative occupations to people now engaged in agriculture and providing means of livelihood to artisans, they will alleviate the intensity of famines, the root cause of which is "the unfortunate circumstance that agriculture forms almost the sole occupation of the masses." They will lead to a diversification of occupations and thus restore the much needed balance of occupations in our national economy. The dispersion of industries will avoid the evils of large scale and centralised industries like overcrowding, slums, physical and moral degradation of the workers, uniformity of production etc.

Some suitable Rural Industries

Dairying: It is one of those bye-occupations which can be carried on by all classes of people in the villages, high or low, without causing in the least any religious or social stigma. Its development will provide the cultivator with a subsidiary or ancillary industry to his cultivation, will increase his slender resources and raise his standard of comforts, and will incidentally solve the great problem of the supply of pure milk and other dairy products to the urban areas. It can be a great success commercially especially in those villages which are in the vicinity of big towns like Cawnpore, Lucknow, Calcutta etc. But even the remoter villages can carry on very profitably the production of ghee, butter, cream khoya etc. and market them in the towns. But unfortunately so far on account of the apathy of the govern-

mont, the low milk-yielding capacities of the indigenous breeds of cattle, lack of quick and suitable means of transport for milk in the past and the absence of any protective legislation, and the difficulty of climatic conditions the industry has not been developed. India is far behind other countries in dairying and in retail dairying. And yet, as Keatinge has said, the subsidiary industry *par excellence* of the cultivator should be the breeding and rearing of livestock, which would provide an occupation and income at all seasons and return to the soil the manure which is necessary to maintain its productivity. In order that the dairying should be carried on more extensively it is necessary to develop scientific breeding of the livestock, adequate supply of fodder and grazing facilities, improved facilities for marketing and finance and proper shelter and cowsheds. Without the removal of congestion in the villages and huddling together of men and cattle and the formation of compact holdings it is not possible to achieve the desired result. But these difficulties are not insurmountable and we have already noticed the efforts made at improvement of cattle breeding, fodder, etc. and the interest taken by the present Viceroy in the welfare of the cattle. It is imperatively necessary to organise the dairy industry in the countryside to strike a balance between crop production and cattle rearing and dairying.

The cultivators in the Punjab, Gujerat, and the Doab in the United Provinces, have combined very successfully intensive farming with cattle-breeding and dairying. Such mixed farming should be practised in other parts also where climatic conditions etc. are suitable.

In 1934 at the suggestions of the Animal Husbandry Expert to the Imperial Council of Agricultural Research, the Provincial Economic Conference recommended that the Imperial Institute of Animal Husbandry and Dairying, Bangalore, should be supplemented by a model creamery with facilities for industrial research and research on the physical and chemical

properties of milk and its reactions to various forms of processing and transport under Indian conditions. The Government of India accordingly sanctioned a grant of Rs. 6 lakhs spread over five years to provide for a research creamery at Anand, in Gujerat, for experiments on handling and processing of milk and dairy products and for the extending of the existing facilities at the Imperial Institute at Bangalore. Since then a separate office for dairy under the Government of India has also been created and separate institutions for research in animal husbandry and for study of poultry diseases and poultry problems in collaboration with the Imperial Institute at Muktesar have been set up at Izatnagar. The appointment of an Agricultural Marketing Adviser with special marketing officers for dairying has given a further impetus to the development of dairying on the lines of the more progressive countries. To train experts, dairying courses have been instituted at the Imperial Institute at Bangalore and the Allahabad Agricultural Institute for two years. Admissions for the award of Indian Dairy Diploma are now made alternately at these two institutes since 1934 under the Imperial Department of Agriculture. Besides there is in each Province a Dairy attached to the Agricultural College for teaching students on elementary lines. Dr. Wright's Report on Dairy Industry contains a lot of information and shows many avenues in which improvement can be effected. Both butter and milk trade have shown improvement in recent years and it is expected that with the development of more co-operative cattle breeding societies and dairies the future of the Dairy industries is assured.

Fruit-Growing :—At present fruit-growing does not enter into the ordinary business of a cultivator. It is true that more often than not mango, guava, Mahua, Litchie etc. trees are planted by the village farmer but the motive that actuates him to do so is not commercial. If the cultivator can profitably combine horticulture with his ordinary occupation, he can very

advantageously utilize the spare time in which he remains idle and thus add to his income. After considering the report of the sub-committee on horticulture and recording their general agreement with the recommendations made, the National Planning Committee aver that the present consumption of fruit and green vegetables in India is very low and infrequent, which affects the health of the people considerably. It is necessary, therefore, to increase this consumption as part of the regular diet of the people, to such a degree as may be deemed adequate by nutrition experts. For this purpose the people should be educated and encouraged to consume more fruit and green vegetables. Sir E. J. Russel and Dr. N. Wright in their reports have recently pointed out the lack of adequate vitamins in the regular diets of the people of India which is confirmed by the prevalence of a number of deficiency diseases; and the former has suggested that the obvious remedy is an increase in the consumption of fruit and vegetables.

The Agricultural Department is making strenuous efforts to popularise better varieties of fruit and to introduce improved methods of cultivation and of packing. A number of horticultural and botanical gardens throughout the country and nurseries for improved varieties of fruit trees have been started under its aegis and horticultural shows are organised to demonstrate the success and importance of careful selection of trees and of proper tillage. Improved types of trees are available on purchase at special agricultural stations in several parts of the country. The recent Agricultural Marketing organisation has also devoted itself to the problems of fruit-preservation, canning, and transport and to packing. A number of good gardens are now working on up-to-date lines in Baluchistan, N. W. F. P. etc. But the economics of fruit-growing are rather complicated and no satisfactory advance can be achieved without the facilities for co-operative marketing as obtaining in California. However, the fruit-growing industry seems to have a promising future before it; for a

certain proportion of the educated classes including the agricultural graduates, who do not know the dignity of manual labour, and, hence, do not kindly take to other branches of agriculture, are quite willing to adopt it as a profession. This will be a much desired improvement in the right direction and will relieve the excessive pressure of population on land and the acute unemployment prevalent these days among the middle classes. The recent rural development programme of the Congress Ministries has given a great stimulus to the cultivation of green vegetables and fruits with a view to supply vitamins, mineral salts and cellulose. An extensive scheme of fruit plantation in villages has been, and is being carried out very vigorously by distributing and planting thousands of trees in U. P. so that the province may be in a position to produce sufficient fruit for every individual and also to help villages to meet a part of their fuel problem to spare dung for manure. About 100,000 packets of vegetable seeds have been distributed over the province and the foundations of establishing a kitchen garden with every home in villages have been successfully laid. This vegetable movement will not only provide vegetables and fruits for consumption to each village home but will also bring health, dispel diseases and mean more work and hence more money. The saving in cash and better health consequent upon the substitution of other costly items of food by vegetables will be accompanied with the conversion of bare and neglected lands into attractive and pleasant gardens. A number of institutions with short courses for training in the manufacture of jams and jellies etc. and in the preservation and canning of fruits have sprung up in the various parts of the country, and the educated unemployed have taken advantage of the opportunities provided by them.

With a view to secure more consumption of fruits and green vegetables the National Planning Committee have recommended:

- (i) protection of the fruit grower by levying of adequate duties on imported fruit;

- (ii) the setting apart of sufficient areas of land for the purpose of developing fruit cultivation ;
- (iii) the provision of cold or other forms of storage (e. g. gas) in markets as well as during transport ;
- (iv) the adjustment of internal transport rates so that they are in keeping with the ability of the fruit grower and the consumer;
- (v) the extension of the system of regulated markets to the trades in fruit ;
- (vi) the encouragement of the cultivation of fruit and vegetables for personal use ;
- (vii) the encouragement, after the Local and Indian market has been fully supplied, of the export of surplus fruit which is the monopoly or specialty of India.

Handloom Industry:— The premier rural industry is the spinning and weaving of cotton, and the intensive development of the handloom industry in collaboration with the Co-operative Departments has been one of the main activities of the Provincial Governments in recent years. The Cotton Tariff Board of 1932-33 stated that the handloom weavers could not take advantage of the protective tariff and needed state aid directly. They recommended a special grant especially because a duty had been imposed on yarn imported. The Government of India accepted these recommendations and set apart a sum of Rs. 5 lakhs per year which was estimated to be equal to the proceeds of an import duty of a quarter anna per lb. on yarn upto 59s. The Conference of Ministers and Directors of Industries in 1933 considered the schemes of the Provincial Governments and on the basis of consumption of yarn by the weavers and the expenditure incurred by them on the development of handloom industry, funds were distributed to them. The grant was limited to five years to last upto March 1940. The United Provinces Government drew up a scheme aiming at all-round assistance in supply

of raw materials, production, finishing and marketing. It comprises a detailed survey of the industry, collection of samples from different parts; appointment of commercial travellers for securing business from far and near, appointment of designers for constantly producing new designs in fabrics, organisation of stores for supply of raw material, supervision of standardized production and formation of co-operative societies for weavers, a Provincial marketing organisation for control of standardized production and marketing, putting up of a finishing plant and subsidizing finishing of handloom products, research and experiments for evolving new appliances and new processes of production. The Survey was started in 1933 and the Handloom Emporium in the same year. Intensive work has been done since at Amroha, Etawah, Mau, Sandila, Bara Banki and Tanda. At all these centres there are stores under a technical supervisor and a store-keeper-cum-dyer. Raw materials are supplied to the weavers and their finished products are sent to the Emporium for sale. The Co-operative Stores get grants for all their expenses and can sell their products directly. Improved appliances are supplied to the societies of weavers and to individuals either free or on hire purchase system. Each centre is encouraged to specialise in one or two lines of manufacture to avoid common fabrics and the glutting of the market with them. For example, *Amroha* specialises in towels and bed-sheets; *Etawah* in shirtings, curtains, and coatings, *Sandila* in gauze, bandage and jaconet cloth and table cloths; *Tanda*, in art silk fabrics, *Gorakhpur* in bleached turkish towels, bed-sheets and dhoties, *Bara Banki* in lungies and gamahbas, saris and coloured goods, and *Mau*, the biggest handloom centre in the province, in Jacquards. There is a model school for the purpose at Mau. The products of these stores have won prizes at the various All-India Exhibitions.

The Handloom Emporium is not only a collecting and distributing centre but also arranges for the supply of new and suitable

raw materials, executes orders and secures them and gets goods manufactured according to designs and specifications. A complete range of samples of cotton fabrics has been collected and arranged in a book, new designs have been introduced either with the help of the customers or with the help of two assistant designers for weaving and one for printing who have been appointed by the Government; researches and experiments in new appliances like the wooden Jacquard, for ordinary and Benarasi work and double box sley for weaving checks and the automatic Jacquard attachment have been introduced and many improvements in the finishing and printing processes have been effected with the help of the Textile Institute at Cawnpore, and the Weaving Institute at Benares etc. Private plants for calendaring have been set up at Tanda and with the help of the Government at Mau and Etawah, while hand-finishing is also being developed by subsidising ex-students of the Dyeing and Printing School to set up in business at the weaving centres. A great success has been achieved by the Emporium in marketing and all kinds of finishing. Commercial travellers have visited all parts of the country and secured orders and samples and the Emporium has established agencies in all parts of India and participated in exhibitions. There is a big agency at Calcutta with a show room as also one at Cawnpore. It has also secured orders on her new designs and samples from London and from merchants trading in U. S. A. not only for broads of Farrukhabad prints but also for handwoven fabrics and prints. It has conducted an advertising campaign for handwoven goods by press propaganda, through posters, handbills, and cinema slides and by participation in exhibitions; it has also improved the packing of handwoven goods and registered a trade mark. The Government propose now to enlist private agencies by subsidising them for organisation of more centres and for the taking up of more cottage industries.

The All-India Spinners Association and the recent Swadeshi fervour have given a very powerful drive to the development of

the handloom industry. There is a network of Gandhi Ashrams and Khaddar Bhandars throughout the country scouting for the hand-spun and hand-woven khadi which alone, it is claimed by its protagonists, can provide the most suitable and lucrative by-occupation to the cultivator in his spare time. Mahatma Gandhi claims that the handloom industry is capable of being adopted by all because it requires very little capital and the raw material is cheaply and abundantly available in the country; the implements can be manufactured and repaired locally and the uneducated and the untrained poor masses can easily practise it; there is an extensive market at home which will ensure a steady income; it is free from the vagaries of the climate and from the social and religious prejudices of the high caste people; that it can help the masses even to fight famines with success. It is undoubtedly a cottage industry and prevents that disintegration of the family and the evils of the concentration of masses of labourers in unhealthy surroundings in industrial towns and centres which result from large scale factories. Even today the handloom industry is supporting 8 to 10 million people and meets one third of the demand for cloth in the country. Under the auspices of the well-organised All India Spinners Association with its ramifications throughout the land, it provides an equitable distribution of wealth among the different grades of workers in the industry. But above all, the rehabilitation of the handloom industry is bound to give a stimulus to a number of allied village occupations and thus help to rescue the villages from the ruts in which they have fallen on account of a criminal neglect by both the State and the intelligentsia of the country. The Gandhian movement has no doubt inspired and encouraged the spread of the cult of the charkha even to the remotest corners of the land and provides a very good supplementary income and relieves the partial unemployment of the agriculturists and others and even the educated unemployed can adopt it very profitably without any loss of

their prestige. But the coarse quality of the khadi and the taste of the people, especially the educated classes, for fine fabrics and the relatively greater cost of it are difficulties in its way. "Handspun yarn is much less regular in size, less strong, and far more expensive than factory-spun yarn" and hence, hand-spinning "has now been almost wholly abandoned in favour of the cotton mill." "The movement for hand-spinning and weaving has, however, one economic virtue in that the typical Indian rural family spends many months of unemployment, which might be thus utilised." Yet, on account of the great relative economy of the factory method, hand-spinning has little chance in competition and hand-weaving is endangered. Dr. Buchanan, therefore, in his "The Development of Capitalistic Enterprise in India" concludes that the attempts to bolster up an out-of-date industry have been comparatively unsuccessful probably because the odds are too great. Cheaper factory products tend constantly to be adopted; and while these improvements have softened its shock they offer little prospect of actual rehabilitation for the industry." However, we do not agree with this pessimistic view and believe that given the government help in matter of finance, organisation, and marketing through co-operative societies and the efforts of the Rural Development Associations and the Co-operative Departments the handloom industry can hold its own. It is still alive and has signs of vitality. The United Provinces Handloom Emporium, the recently established, Commercial Museum at Lucknow, and the improved marketing organisation will play their own part in reviving the industry. The Government should grant loans and other facilities for production and distribution, reduce freights and offer a preferential treatment in duties. It is gratifying to note that the Conference of representatives of the Provincial Governments, millowners' associations, handloom weavers and cotton interests at Delhi in the first week of December 1940, after a review of the various proposals placed before the Central Government from time to time

by the interested parties, has recommended the constitution of a Special Fact Finding Committee to survey the position of the handloom industry in all its aspects with the co-operation of the various Provincial and State Governments. The difficulties of the industry in buying raw materials, in marketing, and in finance, and the possibility of demarcating certain types or styles of cloth for production by the handloom industry alone will be particularly investigated. The conference was not in favour of a levy of excise duty on mill cloth to equalise the prices with handloom products nor was it in favour of a cess on yarn consumed in the mills.

Poultry-keeping can be very successfully carried on as an allied industry but the religious prejudices stand in its way of being widely practised. The low caste people can, and are gradually taking to it, and the Governments in the provinces are helping the industry by opening poultry farms and demonstration cars and propaganda as at Lucknow and Fyzabad. It has also a future before it.

Tanning industry may also very profitably be carried on in the villages by the low castes like the Chamars. The enormous cattle population of the country provides a large quantity of raw hides and skins to maintain a substantial tanning and leather industry. But it has not been organised on any progressive scale. The village Chamars carry on tanning in their traditional and wasteful methods without the aid of modern appliances and chemicals. A large quantity of hides and skins in raw form or partially tanned is exported abroad for improved tanning, and some crude shoes and other articles are manufactured locally by the cobblers for local consumption mostly. To improve the defective methods of flaying, curing, and tanning the Provincial Governments have undertaken industrial surveys and tuitional classes have been opened. Grading stations have been established.

Oil-Pressing:—It is an old industry prevalent in the villages from very early times. The Chief object of the industry

is the supply of the local demand for oil for cooking, burning and ceremonial purposes. It has also felt the competition from mill made oil but still it is surviving in the villages. Efforts are being made to revive this industry through the agency of the All-India Village Industries Association and Rural Development Departments of the Provincial Governments in the Central Provinces, Maharashtra, Bengal, Behar and Orissa, U. P. etc. At the head-quarters of the All-India Village Industries Association many improvements have been made in the oil press with a view to eliminate the dust and dirt which creep into the oil on account of the oil pipe being lower. At Manganvadi a trench is dug to walk for the bullock so that it is lower than the pipe line. The chief oil-seeds crushed are the mustard, rape, gingili ground-nut, cocoanut, and cotton-seed. The low cost of production and the better quality of the press oil are mainly responsible for the persistence of the oil press. Oil industry in fact occupies a very important place in the rural economy and the Provincial Governments have recently tried to improve it by putting up several demonstration units and by subsidizing the use of improved types of mills. India produces a very large quantity of oil-seeds of different kinds, which at present are exported to foreign countries after meeting the demand of the oil presses. There is a great possibility of developing the industry on improved lines. This will encourage a number of allied industries and by providing employment to a large number of people would relieve the pressure on the land and secure a large quantity of oil cakes for cattle food and for manuring. Soap-making from indigenous materials should be encouraged in the rural areas.

Bee-Keeping :—In the pursuit of Agriculture bee-keeping is an allied craft, but the religious prejudices of the people stand in the way of its universal adoption in areas where suitable conditions for its development are existing. Honey has been an essential ingredient in the Ayurvedic and Unani systems of medicine but its production has declined on account of decreased

use in modern times and the competition of the imported varieties. Moreover, the indigenous product is very often adulterated and is not pure. The country abounds in the supply of "pollen and nectar yielding trees" and has four kinds of bees: the rock bee, the ordinary Indian bee, the little bee, and the mosquito bee. In America, England and Australia there are motors electrically operated for the extraction of honey and lorries for the transport of its various products, but here, there is an utter lack of even the rudimentary knowledge of scientific apiculture. The indigenous industry is in the hands of the bee-hunters of the forest and the ordinary villager does not get his daily food which the scientific organisation of the industry can afford. Bee-keeping is doing well in Travancore, Mysore, Coorg, Andhra and Orissa. Students are being trained in the art of bee-keeping at various centres in the country. In the United Provinces Government started the Jeolikote Apiary (Nainital) in 1938 to train students at the institute and has given liberal grants to it since then. It is perhaps the only Apiary in India where training extends to 3 months and where students receive training in practical hive-making. Demonstrations are usually held in the exhibitions to popularise the art of bee-keeping.

Paper Industry:—Hand made paper industry from Sunn hemp is carried on in Manipur State for writing sacred and valuable documents. In Kashmir, ever since the 15th century, it is manufactured from rags, old clothing, cotton waste and hemp and is noted for its excellence and the ingenuity of the methods and appliances. But the paper suffers from two defects viz., its small size and the high cost of production which is due to the waste of raw materials, excessive cost of starch, sizing and low output per man employed. In Ahmedabad and Bombay it is made from old account books and in the Shan States from Thale bark. In the United Provinces the Government sanctioned a grant of Rs. 10,000, in 1938 for the development of hand-made paper industry for which purpose a training centre at Kalpi has been

opened and research is conducted at the Dehra Dun Forest Institute, and small grants are given to the workers. Suitable grants have also been made to the Hindu University at Benares and the Allahabad Swadeshi League for improvements in, and development of, hand-made paper industry. The Experiments at Dehra Dun and Benares have been successful and the tuition-al classes at Muttra and Kalpi are making efforts to revive the old industry. Last year a sum of Rs. 11,684 was provided for the purpose of research and grants in aid to workers. With the spread of literacy this industry will have a wide scope.

Paddy-Husking :—The All-India Industries Association has been trying to introduce the hand-pounding of rice in Andhra, Orissa, C. P., Bengal, Gujerat, Madras and U. P. In Madras the Government has agreed to use hand-pounded rice into its hospitals and Jails. The Babul-wood chakki made at Maghanvadi with many improvements, and husking between 40 to 60 lbs. of paddy, an hour, sells at Rs. 4/8/- only, and has been introduced in large number in the U. P. and Madras. A regular propaganda is carried on by the Association for the use of hand-pounded rice by the villagers so that they may have some life-giving elements in their food. The hand-pounded rice thus not only provides employment for the rural folk and saves them the money which would have to be paid to a rice-mill, but it is also more nourishing and, if unpolished, acts as a preventive against diseases like beri-beri on account of its richness in proteins, fats and minerals. It does not cause constipation. The Rural Development Associations in the various rice producing provinces are also trying to improve the chakki for pounding of the rice.

Gur-making :—This has been practised in the villages since long. The recent prohibition movement has led to the manufacture of jaggery from palmyra juice in Madras which was formerly fermented for toddy. A great improvement has also been made in Bengal. Experiments have been made to produce a simplified centrifugal machine at a small cost to enable the culti-

vators to use it for the manufacture of sugar and candy. The manufacture of gur and sugar etc., will enable the villagers to get molasses containing salt, which is very essential for food. The A. I. V. I. A. has also been carrying on propaganda for the use of gur by the villager in place of refined sugar as it is more useful for health. But it is in the United Provinces and Bihar where the greatest improvements have been effected recently in the manufacture of gur. In U. P. more than one half of cane produced is turned into gur. In 1937 it was estimated that the total amount of gur produced in U. P. was $5\frac{1}{2}$ crores maunds, which was worth Rs. 11 crores a year. In order to encourage its development and provide more employment to the cultivator and better price the Government provided Rs. 37,000 in 1937-38, Rs. 1,00,000 during 1938-39 and Rs. 1,60,000 in 1939-40. "A vast army of gur demonstrators has been trained at Government expense whose business it is to introduce improved types of crushers, to demonstrate the use of suitable chemicals for clarifying the juice and to help in the construction of improved types of furnaces to ensure quick boiling and economy in fuel consumption. The demonstrator also trains local honorary workers who assist in propagating improved methods of manufacture. About 3,500 crushers of the improved variety have been introduced so far. The average output of these crushers is 6 to 7 per cent more than that of the old type, which represents a direct net gain to the cultivator. This taken together with the improved methods of manufacture of gur must have added considerably to the normal return of the cultivator. The gur so produced fetches better price and assistance is also given in organising markets." It has been estimated that in a two months' season each improved crusher would yield a net gain of Rs. 1,200. But this can be increased still more by the improvements in boiling and conservation of fuel etc. which are being introduced.

Besides these "village and domestic" industries others which may be carried on profitably in the various provinces are

sericulture, lac-manufacture, the making of baskets, *moondhas*, mats, ropes and cords, other bamboo and cane work, ceramics and potteries, bidi-making, toy-making, wood-work and carpentry, lace and embroidery and pastry and sweet-making, manufacture of agricultural implements and tools, cotton-ginning and the preparation of fertilisers, bell-metal and brass-industry and carpet weaving and blanket industry etc. With a view to find out the possibility of introducing some of these industries in the different parts of the country industrial surveys have been recently undertaken by the provincial governments, and efforts have been, and are being, made to encourage the revival, improvement and introduction of such industries as are suitable to the climatic and other conditions of the regions concerned. The Central Banking Committee conclude that the introduction of new and the expansion of the existing industries can do much to provide the cultivator with a suitable subsidiary occupation for his spare time, and urge upon the Provincial Governments to devote their earnest attention to the development of these industries. "Despite a complete lack of organisation there are many thriving industries with established markets both in India and overseas. All the industries stand in need of organisation and guidance in the selection of designs and processes, assistance in obtaining suitable tools, in marketing, in the diffusion of market intelligence and in the advertising of their ware. The cheap supply of power for agricultural purposes is likely to stimulate some of the existing industries and also to enable new industries being started. There is a good deal of useful work that can be done by both the Co-operative and Industries Department in the introduction of new and the development of existing cottage industries which will ultimately result in relieving the poverty of the small cultivator and raising his standard of living. ✓

Difficulties of the Cottage Industries

Although the difficulties and problems of different cottage industries are peculiar to them, yet there are certain common

features and difficulties from which they suffer in general. The village and cottage industries are labouring under many handicaps at present the chief of which are those relating to finance, marketing, and organisation. Many of the cottage industries have deteriorated for lack of adequate and cheap credit and grim poverty and indebtedness of the artisans. They are not able to effect sales in an open market they do not produce for stock but only make to order having received the raw material or money as an advance. This causes a lack of steady supply and of the right type of materials. Most of them are indebted to the mahajans and are, therefore, compelled to work through Karkhandars or middlemen who for the sake of their profits do not care for the quality and exquisiteness of designs and stimulate the production of cheap and ordinary things which may yield the higher profit. Their poverty prevents them from employing travelling agents to procure orders and create a demand for their wares or from advertising them. This method of financing leads to the payment of higher price for the raw materials and to higher interests but to lower prices of the products. This method of financing, as the C. B. Committee point out, is due to lack of capital, uncertainty about marketing of products on account of cheap imported substitutes, inability to organise the business, to obtain uniformity of quality in the raw material and in the workmanship, need for co-ordinating specialised functions in such industries, lengthy technical processes in some industries and inability of a small artisan to lock up his Capital for long, and the seasonal nature of the industry and the facilities afforded by the middleman to keep the artisan going during the slack season. A real solution of this difficulty lies in the formation of co-operative societies for the artisans, although they have not worked satisfactorily in the different provinces so far. The main difficulties to be overcome are the *indebtedness of the artisan, lack of organisation among them and marketing difficulties.*

The financial needs of the rural and cottage industries mainly consist of the purchase of raw materials, working expenses,

and accommodation between the production and sale of the products. The existing financial agencies are the money-lenders, the Karkbandars or the merchant dealers, the co-operative societies, and the Government. The joint stock banks do not provide any finance to them, while the moneylender and the karkbandars charge very high rates of interest and supply raw materials at high prices and take the products at low prices. The C. B. Committee think that co-operative banks inspite of their failure are the most suitable agencies for their financing and recommend their establishment on a large scale as in Germany. They have also recommended Government assistance with provision of funds for propaganda and education for the establishment of such institutions. The co-operative societies and industrial unions and banks lend more liberally and should look after the purchase of raw materials and sale of the finished products, and the supply of implements, tools and improved machinery. Where such institutions are not prepared to take initiative trading firms should be encouraged to come between the producers and the co-operative associations. Provincial Industrial Corporations like that in U. P. should be established in other provinces for extending financial help to these industries, and State Aid to Industries Acts like those of Madras, Bihar and Orissa and Bengal should be passed in other provinces also. The Bihar Mechanical Industries Committee recommend that the Central Government should be approached for allocation of the surplus budget for the purpose of financing small and cottage industries and to help such organisations as undertake to form chain stores with branches in various districts and towns, supply machinery on the hire purchase system, furnish patterns, ideas and designs to village artisans and men engaged in small industries supply raw materials and semi-finished materials to producers at competitive prices, and develop marketing facilities by the elimination of the middlemen.

As regards *marketing difficulties* the lack of a central trading organisation on a provincial and on a national basis has

been a chief defect of cottage industries. Lack of suitable marketing organisation and mutual co-operation, and isolation lead easily to the exploitation of these industries by the middlemen. The various Provincial Governments in recent years have made attempts to remove this defect by starting Arts and Crafts Emporia like those of Lucknow, Lahore, and Gauhati etc. The Home Industries Department of Mysore has succeeded remarkably in popularising the village products. All the provincial governments have assisted these industries by propaganda, demonstration and technical assistance and for this purpose they have organised exhibitions and fairs, and subsidised them. Dr. R. K. Mukerji has suggested the formation of a central buying and trading organisation which, once established, should be utilised in working out a constructive policy of commercial and technical information and guidance without which the industries will remain unrelated to the exact nature of demand or the cost of production abroad. Government Emporia have succeeded in familiarising the products of cottage industries not only within the country but also outside, but there is the necessity of a Central Intelligence Agency to advise on improvements and reconstruction of processes of village industries to introduce and apply modern mechanical implements and tools, to experiment and introduce improved designs and to collect and diffuse information on commercial subjects like market intelligence, foreign competition and methods of organisation and propaganda. The Central and Provincial Banking Committees have recommended the establishment of license warehouses and co-operative wholesale depots for storing and sale of products of cottage industries which under the competent guidance of the provincial marketing boards would reduce many of the marketing difficulties. Co-operative purchase and sale societies should also be established in large numbers for the purpose of supplying raw materials and tools, and disposal of the finished products. In pursuance of the recommendations of these committees the U. P. Arts and Crafts Emporium and the Hand Loom Emporium

have recently extended their activities to include the provision of commercial and technical education to artisans, production and introduction of improved designs, advertisement of the improved artistic products of the various industries, opening of branches and agencies in the different towns within and without the provinces and acting as a headquarter of a system of sale depots. Similar emporia should be started in other provinces also. It is through the efforts of the U. P. Emporium that the calico printings of Farrukhabad, gold and silver brocades and silk goods of Benares and the carpets of Agra etc. have been able to secure a market in London and New York after their advertisement at the Wembley Exhibition of 1924. With a view to an intelligent study of the demand, quality and designs, standardisation, and the development of out-station business and foreign trade, the Emporium engages expert designers and commercial travellers and conducts competitions and awards medals and prizes and sanads. The principal artistic lines in which the Emporium deals are the Moradabad brass-wares, Lucknow silver and ivory works, Bijnor ebony works, Saharanpur woodworks, Khurja and Nizamabad pottery works and Benares brocades. The Government have also opened Handicrafts and Rural Development stores at important manufacturing centres on cooperative basis for the supply of new designs and improved appliances free of cost or on hire purchase system and to arrange for the supply of raw materials, collection of finished products and their marketing through the Emporia. A scheme for the marketing of cottage industries is under the consideration of the Government. The *U. P. Cottage Industries Committee 1934*, which reported in 1937, has suggested the inclusion of non-art products and the arrangement to market all the products of the manufacturing centres by the Emporia and that the *central marketing organisation should receive a commercial operation grant of five lakhs* and with its help carry stocks, both for retail and wholesale, employ commercial travellers and

maintain show rooms and agencies at important consuming centres.

As to *technical assistance*, which is very badly required by the artisan, the Government can play a very important part in organising technical training and education by starting technical schools in all the industrial and artistic centres and by giving an *industrial bias to the primary and secondary education*. The artisan must be educated and his syllabus should include manual training and instruction in industrial crafts. The Industries Department in the various provinces maintain a few industrial and vocational schools and technical institutes and some municipalities and non-official agencies also provide for technical education in their own institutions. *More technical institutes should be opened to train the cottage workers*. The Industrial Commission recommended that *state aided demonstrations and handloom factories should be set up to train intelligent artisans*. *Jails and reformatory schools should also provide instruction in industrial crafts to their inmates so that they may establish as artisans afterwards*. *Introduction of new patterns and designs, invention and introduction of efficient tools and implements and research should be carried on by experimental factories and industrial institutes set up by the Government*. *Peripetetic demonstration for the improvement of tools etc. should be conducted by Government demonstrators*.

The United Provinces Government provided a sum of over Rs. 2 lakhs in 1937-39, run two polytechnics at Gangaghat in Unao and Raniwa in Fyzabad and have given snitable grants to them as also to the Barhaj polytechnic in Gorakhpur. With a view to offer technical advice and assistance, they have conducted surveys of minor industries and of village industries like leather, hosiery, apiculture, oil, soap and ghee, Tat patties and mats, baskets, cane furniture and moonddhas etc., toys and pottery, glass and iron articles, and metal industries. They give grants-in-aid to the various industries and run tuitional classes

for them, set up demonstration factories, give grants to the exhibition and fair organisers for the organisation of cottage industries section, engage peripatetic demonstrators and carry on propaganda through exhibition trains and cars. *Foreign technical scholarships* are also given to train people for the improvement of the village and minor industries, as also grants to the educated unemployed (Rs. 1,40,000) to set up as small industrialists. On the recommendation of the Industrial Commission, *Provincial Stores Purchase Departments* have been established since 1921 which through the Store purchase council purchase for public service products of the provinces to encourage the development of industries in them and give preference to Indian goods. *Co-operative stores and societies* and divisional stores have also been set up to help the cottage industries in various ways. *Still greater state assistance is needed to improve patterns and designs, to grant preference to cottage products, to provide marketing and financial facilities as in Germany, Switzerland, Denmark, Hungary etc.* In Germany especially on account of assistance from the state and technical advice, small-scale industries continue to employ about two-fifths of the entire population and embrace more than 90% of the industrial establishments. *The Directors of Industries should give small loans to the artisans and tools and plants should be supplied to them on hire purchase system. The recent Wardha scheme of primary and secondary education should be pushed on vigorously to give the much needed industrial and technical bias to the purely art instructions. A forward rural industrial policy should be followed and the rural industries should be protected through tariff from foreign competition.* The United Provinces Cottage Industries Committee have recommended *the creation of a Cottage Industries Board* to advise about the intensive development of cottage industries and *a central organisation for marketing the products.* The Board would receive a grant of Rs. 1,50,000 for five years and undertake survey of selected cottage industries and organise production by supplying new

designs and improved appliances, by establishing finishing ventures, and by arranging research, experiment and designing at the central technical institutions. Further, an organisation on a co-operative basis with adequate supervisory staff would be set up at each manufacturing centre to regulate and standardise production by providing facilities for instruction by means of demonstrations and tuition classes and by supplying new designs and appliances at cheap rates. Stores affiliated to the central marketing organisation would be established at each of the manufacturing centres to arrange to supply raw materials, to collect the finished products and to finance the workers. Government have already taken steps to give effect to these recommendations and have accepted the weighty suggestion for the establishment of the Board. *We commend the establishment of similar boards in other provinces.*

Although the Royal Commission on Agriculture think that the real solution of the agricultural problem is an intensification or diversification of agriculture and have uttered a warning that "Even with the aid of new ideas and assistance in training and marketing, the contributions which several rural industries can make in reducing the heavy pressure on the land is infinitesimal and in the nature of things they cannot, as a rule, hope for ever to survive the increasing competition of organised industry," yet *we venture to think that in a scheme of national planning of our resources and industry the rural and cottage industries will assuredly occupy no mean place.* India has always been and will continue to be, essentially a country of small and cottage industries and their revival and improvement is a matter of imperative necessity on account of the extensive cultivation of small, scattered and fragmented holdings by the indigent and indebted peasantry. *The real problem in India is not to save and economise labour by mechanisation of industry but to provide labour for the starving millions in the country* and this can be effectively done not by factory production but

by the development of rural and cottage industries to meet the requirements of the villager and to provide a more balanced distribution of wealth. Moreover, the agriculturist cannot leave his land and work in the factory; *he needs subsidiary industries which will provide work for him in his spare time.* With the growing spirit of swadeshism surging the country, the scouting for small and cottage industries carried on by All-India Village Industries Association, All-India Spinners' Association, and the Swadeshi leagues etc. and the increasing interest taken by the Governments in the revival, introduction and development of these industries in various ways, the growing number of technical schools and tuitional classes and improved marketing and co-operative organisation, we are confident that the future of the rural and cottage industries is assured. 25.

CHAPTER XIV

SCIENTIFIC AGRICULTURE AND THE GOVERNMENT (1870-1940)

The development of scientific agriculture in India began as late as 1905. Throughout the 19th century the Government policy centred round the protection of the ryot and the system of the village cultivation. No attempt at introducing capitalistic farming was made except, of course, in Assam where the tea gardens were carved out of jungles and that meant a colonisation of waste lands by bringing coolies from long distances. This colonisation began only after 1833 when the monopoly of the East Indian Company was abolished. At first western methods were introduced in the belief that they would succeed in India e. g. 12 American cotton planters were imported to show how cotton should be grown in 1839 and in 1864 steam ploughs and a battery of implements for cultivation were imported in Madras. Lack of transport facilities prevented investments in land, still 600,000 acres of waste land were alienated in U. P. to foreign and native "undertakers". These lands needed irrigation and reclamation and it was hoped that this would be an object lesson. The methods of farming, however were left in tact and no forced cultures were introduced because the Government adopted a policy of *laissez faire* and was optimistic about the initiative of the people to improve them of their own accord when they had been given the needed security of life and property. After all jute and cotton were developed by the people and the land tenures were recognized and systematized with a view to secure *fixity of tenure, fair rents and freedom of transfer* which, as we have seen before, has not proved a boon to the peasants.

However, agricultural improvement was disappointingly slow. It has been thought that given the security of tenure, the

prosperity of the peasant would be increased considerably, but though the area under cultivation gradually extended, prosperity did not come but brought in its train an increase in population rise in rents and prices and better security of land, and, hence, the greater temptation and credit to borrow from the usurious money-lender. It was further expected that the railways and roads by creating markets would lead to greater specialisation and improved methods of cultivation but again the area under cultivation increased without any effective change in the methods of cultivation. Then again, it was hoped that irrigation works would prove the salvation of Indian agriculture, but although they have done wonders in the Punjab canal colonies, they still did not affect the great majority of the masses living in non-irrigated areas. It was then that the Government realised that a policy of benevolent neutrality in agriculture at least must be superseded by one of active and sympathetic patronage to which the Indian peasant, like his tropical and subtropical compeers, was accustomed by his geography and history. As Mrs. Knowles has pointed out, the peasant cultivation is more stable, sounder, non-artificial, self-supporting as to labour, requires little capital and is the cheapest instrument for the production of agricultural produce on a large scale and capable of rapidity of expansion and a progressive increase of output; but it is primitive, unenterprising, backward and inefficient. It involves Government assistance, education in school gardens, co-operation, marketing and transport facilities, seed selection and distribution, experimental and demonstration farms and a guarantee of price by the Government.

Growth of Agricultural Departments

The twentieth century, therefore, witnessed a remarkable progress in the introduction of scientific agriculture under Lord Curzon. The Famine Commission of 1866 made the first proposal for a Department of Agriculture, but it was only during the eighties, on the recommendations of the Famine Commission of

1880, and on pressure from the Lancashire Cotton industry for increased cotton cultivation within the Empire, after the American Civil War, that Agricultural Departments had been created in the Provinces as a part of the famine prevention schemes. The functions of these departments were, however, entirely confined to collection of statistics, maintenance and supervision of land records and registration. The original idea of agricultural inquiry, land improvement and famine relief was practically given a go-by and the departments were starved of funds. In the meantime Experimental farms had been established at Saidapet, Poona, Cawnpore and Nagpur. The visit of Dr. Voelcker in 1889 revealed the lack of organisation and equipment among the cultivators and emphasized the importance of agricultural education and improvement. As a result, an agricultural chemist to the Central Government and a Technical Deputy Director of Agriculture for Bombay were appointed in 1892. Encouraged by the success achieved by the Imperial Department of Agriculture in the West Indies in 1897, the Government of India appointed an Inspector General of Agriculture in 1901 and re-organised the Imperial Agricultural Department to co-ordinate the work done by the Provincial Departments. In 1898 Dr. Barber was brought from the West Indies to Madras to deal with the sugar cane diseases and his remarkable success set the current of Indian Agricultural Science in the direction of genetics or plant breeding. A great stimulus to the development of Agricultural Department was given in 1903 when a Research Institute and College was set up at Pusa, part of the cost of which was met from the contributions of Mr. H. Phipps an American tourist and philanthropist (£30,000) and a sum of £133,000 a year was set apart in 1905 for development of agricultural experiments, research, demonstration, and instruction. The Departments were relieved of their extra work, their organisation was improved and an All-India Board of Agriculture was set up to co-ordinate the work of the Provincial Departments and to provide a forum to discuss pro-

grammes of agricultural improvement and make recommendations for them. The Indian Agricultural Service was constituted in 1906. Then a Provincial College was established at Poona in 1908 for research etc., and this was followed by an establishment of similar colleges at Cawnpore, Nagpur, Lyallpur, Coimbatore and Mandalay.

In the beginning a European staff had to be recruited to learn Indian conditions, make researches, and train Indian students. Three things were necessary, experimentation, demonstration and the dissemination of the knowledge to cultivators through various ways. The great problem was the increase of the yields and the most practical method of improving the yields was the preparation and distribution of improved seeds. For this purpose researches were instituted by the scientists, experiments were carried out, their success demonstrated, and the Government established depots for the sale and distribution of the improved seeds. The next task was to demonstrate on local plots the improved yielding capacity of the seeds. For that purpose there existed the Central Scientific Experimental Station at Pusa and the Provincial Departments also acclimatised new varieties of seeds and worked at local problems. Recently in commemoration of the visit of Their Imperial Majesties to India Sir S. J. David Sassoon placed the sum of £53,300 at the disposal of the Bombay Government for establishing vernacular Agricultural Schools and for the improvement of agricultural methods.

In 1912 the post of the Inspector General was abolished and his duties were entrusted to the Director of the Imperial Research Institute Pusa who also acted as Agricultural Adviser to the Government of India till 1929. With the Reforms Act of 1919 Agriculture became a Transferred subject under an Indian Minister, but the Government of India retained responsibility for central research, pests and diseases of plants and animals. Since then rapid strides have been made in the manifold activities of the Agricultural Departments, and the centralised control of

the Indian Government has been relaxed. In 1926 the Royal Commission on Agriculture was appointed and in its monumental report it made a number of very important recommendations to revitalise the Departments of Agriculture and to make them more useful and serviceable to the peasant. Its recognition that the problem of agricultural improvement was really the problem of improving the village life inaugurated a new era in the development of the village and agriculture. The most important recommendation of the Commission related to the institution of an Imperial Council of Agricultural Research which was established in 1929 and took over the advisory functions of the Director of the Pusa Institute. In the same year the post of the Adviser was abolished and the publication of the blue books of the Agricultural Department was also transferred to the Imperial Research Council. As recommended by the Agricultural Commission there have been appointed separate Directors for the Agricultural Research Institute, Delhi, and the Veterinary Research Institute, Muktesar. In 1934 the Agricultural Marketing Adviser to the Government of India was appointed who is also the head of the marketing section of the Imperial Research Council. In 1936-37 the work of the Imperial Council of Agricultural Research was reviewed by Sir John Russell and Dr. N. C. Wright and their reports contain a number of valuable suggestions for bridging the gap between the research worker and the cultivator. They are being examined by the Council.

The Imperial Department of Agriculture now concerns itself only with the All-India problems and maintains the Agricultural Research Institute (transferred from Pusa after the devastating Bihar Earthquake of 1931 to Delhi in 1936), the Veterinary Research Institute, the Animal Husbandry and Dairying Institutes, the Imperial Cattle-breeding Farm, the Imperial Creamery, the Imperial Cane-breeding station at Coimbatore and the Imperial Sugar Bureau and Institute under the Sugar Technologist (the Sugar Bureau being transferred from Pusa in 1931 to Coimbatore.)

Besides these Imperial and Provincial Departments of Agriculture, there are District Agricultural Associations and Development Boards consisting of the representatives of the Departments of Agriculture, Co-operation and Rural Development and non-officials to co-ordinate the work of these departments. The tendency towards mutual co-operation and co-ordination of activities of the various Development Departments has been strengthened by the Congress Ministries who were wedded to a progressive policy and programme of all-round Rural Reconstruction and Uplift. Their policy in regard to rural development and co-operation has led to great improvement of agriculture as an industry.

Functions ✓

The work of the Agricultural Departments has two main aspects: (a) Experimentation and Research for improved seeds and methods and for combating pests; (b) Demonstration and Introduction of ascertained improvements into the practice of the cultivator. To achieve these objects, a band of several scientists had been organised by 1912. They comprised mycologists, entomologists, botanists, chemists, cotton specialists, etc. Recently the rapid extension of the use of machinery with regard to agriculture and irrigation has led to the appointment of agricultural engineers to advise cultivators as to engines, pumps threshing machinery and repairs. Thus, as constituted at present the departments have a complete organisation to bring the results of agricultural research into the villages. At one end, there are the colleges and the research institutes and at the other, there are the demonstration farms in the villages to demonstrate the success of the varied improvements in seed, methods, manures and implements and between these two the experimental farms translate the scientific research into field practice, demonstration and seed farms and seed stores. In 1936-37 there were 23.9 m. acres under improved varieties and the progress has continued. The Department is no doubt adequately staffed but the output both in work and results has not

been very striking. There is an enormous gap between the experimental farm and the cultivator's field and the efforts made to bridge this gulf have been inadequate. This is due to rampant illiteracy and ignorance and lack of adequate publicity and propaganda. In the words of Sir John Russell the work is frequently too diffuse ; when this happens the results lack definiteness. In many cases the work is confined too much to the laboratory and the pot culture house : the field and the growing crop should be the centre. Almost always it is restricted to the experiment station : test experiments should be carried out on other soils and at other centres not too far removed, so as to ensure that all factors coming into play are recognised. He is not in favour of limiting the subjects to those of agricultural bearings only in case of the grants to the Universities for research. The methods of propaganda should be investigated and the more efficient ones should be more widely used.

Agricultural Research

Among the agricultural products crops occupy the most important place and an increase in the yields of the different cash and food crops and improvements in their quality and nutritive value is a matter of vital importance to the country. The increase in the fields can be brought about either by the cultivation of more land or by the development of better varieties of existing crops and the improved methods of tillage. As to the cultivation of more land, the net area according to professional survey in [1937-38] in the various provinces was 511,860, 965 acres and only 511, 389, 244 acres according to village papers. Out of this 213, 514,091 acres were actually sown, 45,679,567 were current fallows, 91,968,759 acres were culturable waste other than fallow, 92,225,430 acres were not available for cultivation, and 68,001,397 acres were forests. The Agricultural Departments and the Research Council are making investigations to reclaim and improve the usar and saline lands, but it is evident that so far as the question of bringing more land under

the plough is concerned by reclamation etc. there is a very limited possibility, and the cultivator must resort, therefore, to the cultivation of improved seeds and the improved methods of tillage to achieve his purpose.

Hence, the urgent need for improvement in agriculture is that of more scientific methods, and more capital outlay. So far as the former is concerned, it is very largely a question of demonstration but the latter is a matter of serious difficulty. The cultivator has, as a rule, little money to spare for irrigation, manures and efficient tillage methods. We have already described the efforts made by the Government to improve the rural finance through co-operative societies and regulation of money-lending etc. The cultivator on account of his poverty has been content with a small yield from his holding even though he knows that the expenditure of a little money on capital improvements will mean greatly increased profits. In the present circumstances, the most important consideration for the cultivator is the suitability of his crops to his land. Hence, the first step towards the improvement of the agricultural conditions of the country is *the development of improved varieties of the existing crops*. The operation of the Agricultural Departments in the country are primarily directed to this end. But the resources of these departments are entirely insufficient for the scale upon which they are required to work. The progress has, therefore, been very slow and this has been ascribed, in addition to the paucity of funds, to red-tapism, ignorance and conservatism of the tillers of the soil together with their lack of funds, and inadequate irrigational facilities. The total expenditure of all central and provincial governments annually comes to only Rs. 3 crores on this all-important basic industry. During the last two or 3 years there has been some increase on account of the active and sympathetic interest taken by the present Viceroy and the Congress Ministries and the Imperial Council of Agricultural Research.

A survey of the activities of the various agricultural departments including the Central Research Institute and the Research Council shows very valuable results with regard to rice, wheat, oil seeds, sugar cane, cotton, jute, tobacco, silk, fodder crops, fruit cultures etc. Unfortunately the Departments have so far devoted their attention only to the improvements on export crops and neglected the non-export crops which are equally important from the point of view of food and nutrition to the people and profits to the cultivators. The Imperial Council of Agricultural Research in recent years has made amends for these neglects and is devoting an increasing attention to this aspect also. Recently a nutrition officer has been appointed to act as liaison officer between the work of the nutrition laboratory at Coonoor and the Agricultural Research Stations at Delhi and in the provinces.

A few details of these activities concerning the various crops will not be out of place here. Of all the grain crops of India rice stands first in importance occupying 30% of the cultivated area and its yield is a vital factor in welfare of the country. The Departments of the rice-growing provinces, therefore are devoting much attention to the evolution of improved varieties and the benefits to be derived from these are far-reaching and immediate but the process of improving the rice crop by scientific methods will take time because rice occupies a larger area than any other crop. In recent years the Research Council has done very good work on classification and breeding of rice and has organised a co-ordinated scheme of research. On the recommendations of the Crop Planning Conference of 1934 the Council has constituted a Standing Committee for research work on rice, the recent decline in exports of which to foreign countries has been partially made up by the preference in United Kingdom and to check the imports of rice from Siam, French Indo-China and Japan, the Government of India have imposed a duty of 12 as. per maund on broken rice (Since 1935) for 3 years. The

next important crop is *wheat* occupying 10% of the total cultivated area. To improve the yield and quality of the local types of wheat attention has been directed to the evolution and distribution of strains possessing high yielding and rust resisting powers, improved strength of straw and good milling and baking qualities and to the demonstration of the response of the crop to better cultivation. Pusa 12 ranking with Manitoba Spring Wheat, and Pusa 4 etc. have spread to over 7 m. acres. These improved varieties are giving very satisfactory results even under adverse conditions. A new series of bearded wheats which are also very heavy yielding and possess good milling and baking qualities have been evolved at the research stations to meet the requirements of tracts where the crop is particularly liable to damage by birds. There are hundreds of stores maintained by the governments for the supply of the improved seeds and a multiple policy of seed supply has been organised by the Congress Ministries. A Standing Committee for wheat has also been recently constituted. Under the wheat Import Duty Act of 1931, wheat is protected against foreign competition. To meet the requirements of the country for *sugar* the Agricultural Departments are making vigorous efforts since 1901-02 to breed better varieties of cane and thus increase the yield. Dr. Barber's experiments have yielded valuable results, red-rot resisting varieties have been introduced and attempts are being made to produce superior seedlings by hybridisation between the canes of the north and the south to suit the climate and agricultural methods of northern India and give a better yield. Some of the new varieties evolved at the Cane-Breeding Station at Coimbatore like No. 210, 213 and 214 have well established their superiority over the indigenous varieties and now they command an area of about 4 m. acres. To supplement the work of the departments the Indian Sugar Producers' Association had financed a scheme for carrying on field and factory tests of all the more promising seedlings; and the Government of India had placed at their disposal 143 acres near Pusa. For some years

a Sugar Bureau had been in existence furnishing advice to cultivators, manufacturers and capitalists, publishing production and consumption statistics in different parts of the world and maintaining its own cable service for the purpose. It had also taken over the testing and multiplication of improved varieties of sugar-cane near about Pusa, and arranged mill-trials for the more promising strains. In recent years the improvement and extension of the sugar crop has been the most fruitful of the projected developments of Indian agriculture. In 1919 a Committee was appointed to investigate into the production of sugar which recommended the establishment of a Sugar-Research Institute and a large demonstration factory which was postponed for want of funds. At the instance of the Research Council the question of protection was referred to the Tariff Board in 1930 which recommended the grant of protection to the industry at Rs. 7/4 per cwt. for the first seven years and of Rs. 6/4 for the next eight years. The Board also recommended a grant of Rs. 10 lakhs annually to the Imperial Council of Agricultural Research for research work on sugar-cane. The Central Sugar Research Institute at Cawnpore since 1936 has undertaken research on problems of sugar technology. The Council can justly feel proud for their remarkable success with the production and utilisation of the sugar cane crop. Since it began its work the area under improved varieties has increased considerably. A Sugar Committee on the lines of the Central Cotton Committee has been set up to tackle the problems and cultivation, production and marketing of sugar and sugar-cane.

Cotton is by far the most important fibre crop and India stands second only to America in total production; but it is short in staple, poor in spinning value, and smaller in yield per acre. So there is a vast field for improvement in its cultivation. The Agricultural Departments and the Cotton Committee have been strenuously trying to increase the yield and improve the quality. The area under cotton has been considerably increased and now

it amounts to a quinquennial average of 24.6 million acres. Improved types in the Punjab bring to the cultivator about £3 per acre more than the local strains. In the C. P. the area under Roseum noted for its ginning quality has increased, while in the Canal Colonies in the Punjab the area under selected strains of American cotton is also increasing. In other cotton growing parts of the country also similar improvements have been made. In 1938-39 there were 5.6 m. acres under improved varieties. The popularity of such high-yielding varieties as Punjab-American, Madras-Cambodia, and Karunganni shows the success attained in the improvement of cotton strains. It has now been shown by the Indian Cotton Committee that, given favourable conditions, India can produce long-stapled cotton of the finest quality. In the Sind and the Punjab long-stapled varieties are doing extremely well. India has so long been essentially a producer of the short staples because the climate suits it better and the country's trade is in it; and because it yields better and requires less labour and expense. But the recent rise in the American cotton prices and the general shortage of supply ensure that the Indian long-staples will secure their proper place.

The Indian Central Cotton Committee established in 1921 affords a meeting ground where all sections of the trade can consult those engaged in scientific work for the improvement of the crop. It advises the Government on questions affecting cotton and co-operates with the Departments of agriculture, and gives grants-in-aid for the investigation of scientific problems concerning cotton. It has now adopted a definite research programme and is financing a Central Cotton Research Institute at Indore together with certain Central Indian States. A technological laboratory, including an experimental spinning plant, and a research laboratory have been established at Matunga in Bombay. These institutions have proved of great value to the cotton workers in furnishing an accurate information regarding the spinning questions of the new strains. But in

order that Indian cotton may obtain adequate prices in the world market, it is essential that not merely the improved varieties be evolved and their spread encouraged but also that its adulteration with the short staple inferior local strains should be effectively prevented. Hence, at the instance of this body, very important pieces of legislation designed to prevent adulteration and promote better marketing have been passed recently, namely, the Cotton Transport Act and the Act for the regulation of Gins and Presses; the Bombay Cotton Markets Act, C. P. Cotton Markets Act and the Madras Markets Act. Further, under the recently passed Cotton Cess Act, the Committee has been constituted a corporate body with its own funds independent of the Government of India. The proceeds of the levy of a small cess (2as.) upon the whole of the commercial cotton crop are devoted to the promotion of agricultural and technological research in the interests of cotton industry. To prevent the growth of inferior varieties and to check the malpractices tampering with the quality, legislation has been enacted in certain provinces and in others is under consideration. Still, there is much room for improvement.

As regards *jute*, the Agricultural Department has selected superior strains from the common mixtures found in the field which have gained an immense popularity in Bengal and Bihar and Assam. Progress has also been made in extraction of the fibre from sunn hemp. The disease resisting powers of the improved varieties are remarkable and investigations have now been undertaken into the manure requirements of jute. With the help of these improvements together with the development of marketing facilities, the jute fibre stands a promising future. The Indian Central Jute Committee since 1936 is running a technological laboratory for conducting research on jute and jute products.

The Indian Coffee Cess Committee since 1935 utilises the proceeds of a cess of 8as. per cwt. for propaganda, agricultural and technological research and better marketing.

Tea:—The Indian Tea Association maintains a Research Station at Tocklai and finances it from a cess (since 1903, 8 as. per 100 lbs of exports) at 12 as. per 100 lbs of tea exports. There is a vast field for improvement in the cultivation of *Tobacco* and its allied industries which is indicated by the importations of unmanufactured tobacco to about 3 to 4 million lbs. The high import duty upon tobacco and cigarettes has stimulated the native manufactures and there have been persistent demands of an improved type of tobacco seed suitable both for cigarette making and for general purposes. The Agricultural Department and the Central Research Council have been experimenting in the selection of such a tobacco plant which will increase the out-turn of the better qualities of Indian cigars which will hold their own in competition with imported cigars and tobacco.

The dietetic value of vegetable oils has immensely increased since the last war; and therefore, there seems to be an increasing possibility of its importance being enhanced. As *oil seeds* are very important as valuable exports both in the form of seed and cakes, the Agricultural Departments and the Council have been engaged in the selection of superior varieties of seeds and in their introduction into districts having suitable climate and soil for them, so that the yield may be increased.

The Agricultural Departments have also indirectly tended to increase the *fodder supply*, since improvements in the yield of grain crop involve simultaneous increases in the yield of straw; but more and more attention is now being directed to the problem of fodder raising and of storage. Research has amply shown that geoeal weeds hitherto regarded as useless intruders in the field can be utilized most profitably as cattle food.

These examples clearly establish how far research work in connection with the crop in the shape of seed...selection, cross-fertilisation, sports, acclimatization and hybridisation on Mendelian lines can go a long way in improving the culture of various

crops and in increasing the yield. The local conditions of soil, climate and the surface environment as well as practices are thoughtfully studied and, then to bring them to the level, the practices in vogue in the more advanced parts are introduced in the more backward. As regards crop development, the indigenous varieties are improved by the isolation of pure types and only those which promise the best yield and qualities are selected and their defects are made up by hybridisation. The new seed is then widely distributed, while attempts are made to introduce new but thoroughly adaptable types. This is accompanied by ascertaining the character of the soil and the influences on it of ameliorating processes like draining and irrigating and care is also had of the principles of manuring and the maintenance of fertility. Only such types are evolved as will fit in with local conditions and not entirely new types. The question of the suitability of the crop to its existing environment may not be of any moment to a big capitalistic farmer having an immense capital or credit to modify the rigour of the circumstances by water, manure and efficient tillage methods, but it is of utmost importance to the indigent Indian ryot. The improvement of the soil and the local conditions will therefore be naturally a slow process. Still however, the advantages of varietal improvement lie in the fact that once the improved strains are established their propagation will be simple and will not cost any extra amount to the grower; and that such types may be evolved as yield better quality and quantity resist various plant diseases and natural disadvantages such as short seasons and droughts. The task of selection and hybridisation can proceed but very slowly on account of the numerous varieties cultivated and the difficulties of keeping the selected strains free from degeneration and pure. Thus, we see that even if the practice of scientific agriculture is beyond the means of the cultivator, much improvement can be achieved by the adoption of better and improved types of seeds and processes even under the existing conditions of the soil and tillage.

But the Research work is not confined only to the evolving and culture of improved strains and better seeds. A good deal of the attention of the Agricultural Department is devoted to soil investigation and manuring. Departmental investigations have been successfully conducted in regard to the reclamation of saline lands, the conservation of soil moisture, the movement of nitrates in the soil, the storage of farm-yard manure, the efficiency of different methods of green manuring, the production of artificial manures and the solubilisation of mineral phosphates, the detection of adulteration in ghee, animal nutrition, dry-farming and control of diseases and pests. The Provincial Departments are also devoting much attention to soil investigation.

"The development of scientific agriculture supplemented by entomology has been the most important event in the economic development of the British tropics."* While on the one hand, the doctors have fought successfully with malaria and other tropical diseases, the scientists have fought the insects and the fungoid pests which destroy plants. Agricultural Departments with botanical gardens and farms were established as early as the middle of the nineteenth century but they were confined to acclimatisation of imported plants, land records and the collection of statistics only. By the end of the century however, the importing of new cultures gave place to research work and the botanical stations instead of being merely acclimatizing centres became great centres of scientific research equipped adequately with chemists, entomologists, mycologists, veterinary surgeons, agricultural engineers and botanists. The object of these agricultural researches is the improvement of seeds by the elimination of mixtures and their protection against pests, insects, fungi and noxious weeds.

The success of the entomologists in this respect is remarkable. By constant application eggs have been discovered

* Knowles : *Development of British Overseas Empire*.

which are destroyed or are preyed upon by parasites. This has made for improvement in yield of cotton. Mycologists have dealt successfully with the coffee cankers, quinine cankers, diseases of tea plants, potatoes, palms etc. In fact the research of the entomologists and the enthusiasm of the mycologists have opened a new era and have considerably increased the profits of the Agricultural Departments. ✓

The study of pests, both animal and vegetable, is a matter of great moment to India, because the damage done to such crops as rice, sugarcane, and cotton is very serious. The Imperial Entomologist has estimated that the deprecations of insects alone cost the country Rs. 200 crores each year. The main difficulty in this regard encountered by the Department is that of persuading the fatalist cultivator that the outbreaks of locusts, pests and fungi, which he endures with patient apathy as a visitation of the higher powers, can be effectively controlled. Some idea of the loss suffered by the country annually from animal pests can be had by taking the specific instance of a rat. In addition to his disservice in spreading plague, it constitutes a considerable burden upon the food supply. It has been calculated that an adult rat consumes nearly one ounce of grain each day. Now at a moderate estimate the total rat population of India must be about 800,000,000; and assuming that grain is selling 10 seers a rupee, the loss caused to the country therefore, through this source alone, must be near ₹15,000,000 per annum. The Agricultural and the Public Health Departments are closely co-operating in rat elimination; but the real remedy lies in such methods of grain storage as will be damage-proof and the construction of rat-proof dwellings. The question of adopting elevators has engaged attention for some time and has increased in importance recently owing to the railway congestion experienced in the grain season. A large mass of data has been brought together through the Commercial Intelligence Department. But the success depends upon its receiving adequate consideration by the public through propaganda.

Agricultural Research is now controlled and organised by the Imperial Council of Agricultural Research whose primary function is to promote, guide and co-ordinate agricultural and veterinary research. Its organisation consists of a Governing Body and an Advisory Board composed of the representatives of various interests. It has a standing committee for Sugar, Fertilisers, Locust, Oil Crushing, joint committee of I. C. of Agricultural Research and Indian Central Cotton Committee, Animal Nutrition Dairying and Cattle Breeding. It is linked up with the Imperial Agricultural Bureau. It arranges for post graduate scholarships and research, maintains a reference library and makes grants to universities etc. for agricultural research. It was established with a lump grant of Rs. 25/- lakhs and gets an annual grant of Rs. 7½ lakhs from the Government of India. Besides this the Government has given a grant of 171 lakhs for research in general and on sugar, marketing, dairying etc. Provincial Research Committees have also been formed.

So far we have discussed the importance of research work and the supply of improved seeds and have briefly surveyed the success of the Agricultural Departments concerning various crops. But the utility of their work depends to a large extent upon an effective diffusion of the results of their labours among the masses. Improved strains and better processes are of value only in so far as they are adopted by the cultivators. For this an intensive as well as extensive propaganda is necessary and the best method is demonstration. But their popularisation presents serious difficulties. The majority of the farmers are wholly illiterate, and so, like other countries, leaflets, pamphlets, circulars, magazines and newspapers cannot effectively link the farmer to the scientist. The only satisfactory method borne out by experience is that of ocular demonstration; and the most convenient methods of convincing the farmer of the practicability of the improvements made is the cultivation of small plots of his own by the demonstrators. For these purposes the Governments have established seed and demonstration farms, implement and

seed depots. and the like and have employed a host of trained touring demonstrators. The co-operative societies contribute greatly to the success of these farms and in every province, the agricultural and co-operative Departments are co-operating in bringing improved seed, better implements and more advanced methods within the ken of the farmer and at the same time providing him with the resources to profit from them. The Congress Ministry in U. P. established 379 extra seed stores, pushed the cane development programme vigorously, established lakhs of plot demonstration farms, introduced the seed multiple scheme to ensure an ever increasing quantity of improved varieties of seeds and made the seed store the centre of all agricultural activity in the circle. It is an integral part of this scheme that the seed store should contain an adequate stock of agricultural implements both for sale and for exhibition and that a small smithy in charge of a qualified mistry to train the rural blacksmith in the art of mending improved agricultural tools and implements and to serve as a service station should be established.

Another very laudable attempt to educate the cultivator in the arts of improved and scientific agriculture is *the holding of agricultural fairs and exhibitions* in several districts of the different provinces. Cultivators flock to these fairs and exhibitions and have an ocular demonstration of the various improved processes and implements and machineries and they are bewildered to see them but without any enthusiasm or inspiration because of their utter inability to adopt them for the reasons we have already discussed. Recently a huge Agricultural Show in the Bombay Presidency was held at Poona, for which the Provincial Government formed a fund of $1\frac{1}{2}$ lakh of rupees and the residue of $\frac{1}{2}$ lakh has been turned into a Trust Fund to ensure the holding of the show annually at different centres. The show was the largest ever held in Asia and was visited by representatives from the various provinces and the members of the Royal Commission on Agriculture. It is a move in the right direction

and other Provinces perhaps have also decided to hold annual shows on such a large scale. However, it must be borne in mind that though scientific research, experimental and demonstration farms, agricultural exhibitions and fairs will be of much use in familiarising the cultivator with improved methods of agriculture, yet their usefulness will be very little as long as the appalling illiteracy and the indigence of the cultivator persist. Therefore, the crying need of Indian agriculture today is the removal of ignorance and illiteracy saddled with chronic and acute poverty at any cost by all means possible.

Agricultural Education

It is needless here to emphasize the importance of education. A moment's reflection makes it plain that many of the problems confronting India today have one single root. This is the general lack of education at present characterising the masses. According to the Census of 1931 only 95 persons out of every 1000 are able to read and write a letter. Until this cardinal defect is remedied, it is impossible for the country to attain economic and political well-being. Unless the ideas of the people can be enlarged and their outlook extended beyond the narrow bounds of tradition, the masses must remain poor and ignorant. Sir P. C. Ray in his evidence before the Royal Agricultural Commission has rightly observed that unless we have compulsory primary education in the country, there is no use having research institutes of the type at Pusa and elsewhere. The utility of the Agricultural Departments with their demonstration farms and the technical schools under the Industries Departments would become manifold if they find the ground prepared for them by primary education. The instruction in the primary and secondary schools and the Colleges and the Universities is predominantly literary. The structure of Indian education is ill-balanced: the poorer classes are overwhelmingly illiterate while the middle classes are educated in a proportion equal to the countries which are economically more developed. The craze for the "white collar professions" is responsible for this state of affairs.

The present system of education ignores altogether the requirements of the agricultural population which constitutes the back bone of the nation. The farmers have learnt to their cost that their children after getting education in these schools despise manual labour, and like the big sahibs, regard their parents as the hewers of wood and the drawers of water. The poor helots of the soil have discovered that their children are not obtaining from the primary and middle schools the kind of teaching which will enable them to be better bargainers or more enlightened members of the community. Vocational training which has recently been advocated by various eminent educationists and the Sapru Committee has not found much favour with the middle classes on account of prejudices.

Recently, however, there has been a move in the right direction and attempts have been made to give a 'rural bias' to primary schools. Courses in nature study have been instituted in the primary and secondary schools for the purpose, and in the U. P., the Punjab and Bombay etc., definite action has been taken to train teachers in nature study, horticulture etc. An increasing agricultural bias is being given to the system of education but, excepting a few Middle Schools and Intermediate Colleges no practical instruction in Agriculture is attempted. Under the regime of the Congress Ministries much progress has been made in this direction also. Agriculture has been made as one of the optional subjects in the High School Curriculum and provision has also been made for Agricultural Training in Intermediate Section. The Punjab has introduced practical training in Agriculture in the Vernacular Middle Schools with remarkable success and other provinces should take to this scheme. The Royal Agricultural Commission was opposed to the Bombay type of Agricultural Middle Schools for special training to the sons of farmers in the local vernacular because they are very expensive and artificial. It was in favour of the Punjab type of Vernacular Middle Schools in the rural areas and hoped that they would develop into rural community centres.

It also recommended the institution of a more advanced course in Agriculture in the High Schools in rural areas. Agricultural bias schools are now increasingly being established to adopt the system of education to the needs and environments of the agricultural community. The recent Wardha Scheme of education which has been introduced in the Congress administered provinces to train and educate the students through crafts will go a long way in improving the facilities for agricultural and vocational education. Agriculture should be made a compulsory subject in the curricula of vernacular middle schools. Other Colleges and Universities should also introduce, so far as possible, a training in Agriculture and Agricultural Economics. The Royal Commission stated that the Universities could undertake economic surveys of social conditions and imbue rural communities with ideas of leadership and service. The State and the educated classes and social service agencies should devote a greater attention to the villages and the needs of the rural communities than they are doing now.

At present the system of agricultural education is very defective and hardly leads to appreciable practical results. There are 5 Agricultural Colleges only and a number of Agricultural Middle Schools which provide for Intermediate and Degree Courses in the science and practice of Agriculture, and the Central Institute at Delhi (now) provides for a post-graduate training. Most of the graduates of these Agricultural Colleges, however, do not seek to start farming on scientific lines for which their training has made them capable but hunt after Government jobs. The Agricultural Commission emphasized that to be really useful, agricultural training should consist of two parts: higher and lower, the first for turning out experts and organisers, while the second for assisting actual cultivators in the methods of cultivation. For this purpose there should be established agricultural middle schools of the Punjab type in every Tahsil and the existing educational policy concerning

background. The spread of western education, thought and ideals and the ruination of the thriving rural and cottage industries by the unbridled and unfair competition of cheap but attractive and shoddy goods, turned out by the gigantic machine from western countries, led the intelligentsia to believe that the economic development and material prosperity of the country could be achieved only by the cheap and slavish imitation of western methods of production and distribution without any regard for environment and heredity. They seemed to echo with Sir T. Morrison that Bombay rather than the never-yielding field is the sure presage of India's future.

It was only towards the close of the first decade of the present century that as a result of the Swadeshi Movement in the wake of the Partition Movement in Bengal, interest in the village and village industries was revived, although there are people, like Dr. S. S. Nehru, who think that the establishment of law and order in itself is Rural Uplift. But strictly speaking it was only after the Report of the Royal Agricultural Commission that both official and non-official attention was focussed on the village and its needs. From its very inception the Congress has emphasized the necessity of village uplift and rural reconstruction and kept Swadeshi and boycott of foreign goods in the vanguard of its programme. However, it has been only during the inspiring leadership of Mahatma Gandhi that a powerful drive has been given to the upliftment of the masses, the betterment of their social and economic life and their physical, mental and moral advancement. The Government, as we have seen before, has tried through the development of road and railways, post and telegraphs, irrigation works, co-operative societies, Takavi Loans, marketing facilities, education and Agricultural Department with all their manifold operations to improve the material and moral well-being of the people, but the expectations of the workers and promoters in all these departments have been belied. The Co-operative movement in itself is a great lever for rural uplift and reconstruction; and any policy of rural reconstruction embraces

agriculture, education, co-operation, cottage industries, excise, public health, public works, animal husbandry, better sanitation and female uplift. We have seen how the promoters of the co-operative movement entertained high hopes to renovate and reconstruct the villager's life but the movement has fallen so short of their expectations. The chief reason for this dismal failure is the extreme backwardness of the rural folk and we have emphasised that the ultimate success of the movement lies in its reorientation to envelope the whole life of the village and not in its restriction to supply of credit alone. We have failed in our attempts, if we have not made it perfectly clear at practically every stage of our discussion of the problem of agricultural improvement in these pages that so long as the cultivator is steeped in ignorance and illiteracy, is heavily in debt, has an extremely low standard of living, practises agriculture in a crude and primitive fashion with archaic tools and implements, and has a fatalistic and listless outlook on life, it is impossible to achieve his material and moral progress. There has been a criminal neglect of the educational, sanitary, medical and social sides of the village life and that explains the failure of the co-operative and other departments aiming at the economic prosperity of the rural areas. The Royal Commission on Agriculture recognise this when they state that no substantial improvement in agriculture can be effected unless the cultivator has the will to achieve a better standard of living and the capacity, in terms of mental equipment and of physical health, to take advantage of the opportunities which science, wise laws and good administration may place at his disposal. *Of all the factors making for agricultural progress by far the most important is the outlook of the peasant himself, and this is determined by his environment.* The responsibility for initiating steps to effect this improvement rests with the Government" supported by public opinion. Hence, the urgent necessity of rural uplift and reconstruction to galvanize the village community into life, to develop community life and spirit in the villages and to

build up happiness, prosperity, health and wealth, knowledge and richness of character in the villages whose residents lead "a dull and dismal existence," which is "drab, monotonous and lacks variety."

It is a matter of gratification that a good deal of attention, both official and non-official, has been devoted in recent years to village uplift and reconstruction. However, till 1935 the attempts at rural reconstruction have not been *sustained and organised* on a mass scale but individual and isolated. Enlightened individuals imbued with the spirit of social service and fired with the ambition to contribute their mite to the welfare of the humble rural folk have, of their own accord, tried to resuscitate the village community. The most celebrated individual scheme of rural reconstruction is that of Mr. Brayne of the Gurgaon fame. The system of the village guides introduced by him in the Gurgaon district in the *Punjab* covers a wide range of subjects like education, medical relief, improvement of agriculture, female education and maternity welfare. In the *Central Provinces* and *Berar* similar work has been carried on since 1929. The village guide acts as the channel for transmitting the advice of the experts in the various departments touching the lives and the environments of the rural areas. The Gurgaon uplift scheme attempted to supply, in the words of the Agricultural Commission, "a strong central driving force that will encourage enthusiasm, develop public spirit, and provide suitable material for active workers in their campaign in favour of the improvement of village life. The scheme embraces the work of every department of Government engaged in rural areas; it seeks to assist in securing the adoption of the advice of the expert by a well-planned propaganda campaign; it depends for its success on the enlistment, in the cause, of everyone willing and able to assist, official or non-official, and more especially of the people themselves whose welfare is in the balance. Lecture, song, drama, magic lantern, cinema, and even the loud speaker are made to contribute what they can to arouse the people to a

realisation that they themselves are largely responsible for their undesirable condition." Mr. F. L. Brayne has now been appointed as Commissioner for Rural Reconstruction in the Punjab. *Bengal* has also appointed a similar officer. In *Bombay* in 1933 under the guidance and advice of Sir Frederic Sykes a great impetus was given to rural uplift. As a result of an intensive propaganda a scheme for uplift was formulated and the work was being carried on earnestly by District Rural Uplift Committees with the District Magistrate as chairman and the co-ordination of the work was done by the Divisional Officers. The senior local officers of the various departments and influential non-officials were also the members of the Committee which controlled and co-ordinated the work of village uplift in all its aspects viz., education, sanitation, agriculture, housing, cottage industries and indebtedness. But on account of paucity of funds and lack of a whole-time rural development officer in the district the scheme could not achieve much.

Rural development can be carried on either by Government or by the people themselves. The real thing is to revive the spirit of organic unity and stop the rot of disintegration which has crept in and then to rebuild the social, the cultural and the economic life of the villages. To be lasting and permanent this much desired improvement should come from within and should not be imposed from outside. Therefore the best method of rural uplift was to kindle the fire of ambition to improve their sad lot in the villagers and this can be done only by making them interested in the scheme of development and by enlisting their co-operation and by propaganda, persuasion and education. Therefore, *the primary thing is to bring about the development by the people themselves, and the Government should give help and guidance, provide inspiration, and chalk out general schemes and programmes of development.* The Gurgaon scheme of Mr. Brayne lacked this fundamental of rural uplift. As Mr. Darling has pointed out the whole thing was forced upon the reluctant but docile villager by the authorities, the plan was not well thought out and the

village guides were "hurriedly selected, insufficiently trained and inadequately supervised." The local conditions were not properly studied and propaganda though intensive was crude, and raw youths were recruited for the work. But Mr. Brayne succeeded in advertising his work, and attracting public attention both inside and outside. His failure, however, made one thing clear that 'to ensure continuity of policy and steady pressure over a long period' it was essential to have a permanent organisation for rural uplift and to make a sustained and co-ordinated effort to rescue the villager from his rut of squalor, dirt, disease, ignorance and poverty. The rural uplift work of Dr. S. S. Nehru in the Rae Bareilly district of U. P. is of a more permanent value, because unlike the village guides, village and district associations and agencies have been created to carry on the work. Dr. Nehru has described 3 types of rural uplift—individual, joint, and integrated effort; and seven or eight stages of its development. His scheme brings together "Zamindars and Kisans in self-help, not as had fellows in misery, but as collaborators towards Rural uplift." While laying down the duty of Rural uplift he sounds the following caveats "*Per contra* Rural uplift is the solemn duty of the Rural Fellow himself—through self-service, self-help, self-sacrifice—alone no less than in team." Any scheme of rural reconstruction should assure at least a minimum subsistence to every member in the village, foster a spirit of co-operation by avoiding competition and curbing the profit-motive and should aim at making the village a self-contained unit.

The Indian National Congress has been identifying itself more and more with the masses and has kept the village re-organisation and reconstruction in its constructive programme. It 'necessarily implies revival and encouragement of the dead or dying village industries besides the central industry hand spinning.' Therefore after its 48th session in 1934, at the instance of Mahatma Gandhi, it formed the "All India Village Industries Association for the revival and encouragement of the said industries and for moral and physical advancement of the villages."

The village reorganisation and reconstruction programme of the Association includes the physical and moral improvement of the villager and betterment of his economic condition. To improve his physical health and vigour the Association has been carrying on an extensive programme of sanitary improvement in the village viz. road making, lanes cleaning, improved and economic methods of disposing human excreta, cleaning tanks and wells, and teaching the proper use of water and sanitary habits in regard to spitting, ventilation, clothes and cooking. To evolve a balanced diet and supply nutrition and reform a campaign is carried out for the use of hand-pounded, unpolished rice, whole-wheat hand-ground flour and gur, and fruits and vegetables. To improve the economic conditions of the villager it helps in every way possible to revive and introduce village arts and crafts industries by conducting intensive survey of the villages etc.

In 1934-35 budget, the Government of India made a striking gesture providing a sum of Rs. 1 crore and placed it at the disposal of the provinces ear-marked for rural development in consultation with them. The critics of the Government have said that it was to take the winds out of the sails of the Congress and with an eye on the coming elections that the Government of India was aroused from its traditional lethargy. Whatever the motive may be, the Government is to be congratulated on having realised after long last that there was an urgent need of an intensive drive for rural uplift. Personally we are inclined to think that it was perhaps the presence of Lord Linlithgow at the helm of affairs, who, as the chairman of the Agricultural Commission, had emphasized the necessity of changing the outlook of the peasant and his environment and had laid the responsibility for initiating it on the Government. Moreover, the Provincial Economic Conference of 1934 also gave an impetus to the movement. The Central Government grant to the provinces was given for 5 years with which and with their own contributions, they have carried out all sorts of improvements in Agriculture, sanitation and hygiene etc.

But it was during the regime of the Congress and other popular Ministries in the provinces that a most powerful and intensive drive was given to rural reconstruction and uplift programmes. The results achieved so far have been very substantial. Thousands of better living societies, panchayats, assembly halls, seed stores, plot demonstrations, have been established and wells and other irrigation facilities, construction of roads, medical relief, cattle breeding and rearing etc. better sanitation, cottage industries, reorientation of co-operative societies, plantation of trees, tenancy reforms, debt redemption, prohibition and temperance and educational facilities have been provided. It augurs well for the future.

Rural Development in the United Provinces

Prior to 1935 the District Boards were supposed to look after the rural areas and their welfare but their resources were too inadequate for the task and the members lacked aptitude. Besides providing primary and Vernacular Middle Schools, in certain Villages and Tahsils, constructing few roads mostly *kachcha*, they did nothing to foster the development of the rural areas. Provision of water supply, village communications, medical relief, facilities for girls' education and rural sanitation were most inadequate. Ill-ventilated mud-hovels, dingy and cheerless, lot of rubbish and refuse piled up in the front or close proximity of the houses, no drainage system, and an ill-dad, ill-nourished, indigent, ignorant and illiterate people weighted down by ancestral debts, — such is the picture of the monotonous and dull life of drudgery that one comes across in the villages. To improve this deplorable condition, on the receipt of a grant of Rs. 15 lakhs annually from the Central Government in 1935 and supplementing it with an additional grant of their own by Rs. 1 lakh, the Government in the *United Provinces inaugurated* a five years' plan of Rural Development. The Collectors were given the charge of development and were assisted by a few inspectors and organisers. Work was begun in

45 districts excluding the Kumaun division and every district was given a discretionary grant of Rs. 5,000. A selection of 72 villages in each district was made for this work and they were divided into 6 centres each of which was kept in charge of a supervisor and for each district there was an Inspector. The Collector ordinarily performed his function through a Deputy Collector and an Advisory Body consisting of officials and non-officials was nominated by him. Out of a total grant of Rs. 4,00,000 annual for about 1,05,000 villages in the province no less than 1,66,000 was consumed in salaries of the staff and after a provision of Rs. 5,000 for every district the remainder sum was spent in contingencies.

This was the scheme in operation when the Congress Ministry stopped in July 1937 and on investigation it found that the plan was a mere paper scheme, actual work in the districts was most unsatisfactory and besides framing good rules for the guidance of the workers, the whole machinery was soulless and had failed to arouse any enthusiasm. There was no non-official co-operation except from selected zamindars, in many districts the grant lay unutilised and in others "the rural development staff had made a show of work in having the lanes paved and ventilators inserted in the houses in the selected villages."* The Ministry at once realised that the limitation of the work to 72 villages in every district would take an inordinately long time to achieve any substantial improvement in the social and economic conditions of the village community; increased the number to 300 and grouped them in 20 centres, each centre being placed in charge of an organiser. The salaries of the inspectors and organisers were reduced and a large staff from educated youngmen with a rural bent and special aptitude, was recruited. In fact it introduced a revolutionary change in principle and policy of rural reconstruction. It emphasised that in all rural development activities like agricultural improvement, animal husbandry, cottage industries, rural credit and debt redemption,

* *Congress Government in U. P.*

marketing medical relief and sanitation, communication and mass education the co-operative principle must be dominant and that there should be the closest collaboration and co-operation between different Government departments and between them and non-officials.

"The whole policy underlying rural reconstruction and rural development in the United Provinces was intended to galvanize the village community into life, to renew its strength, and to make it an instrument of its own salvation."*. It aims at increasing the amenities of life by corporate action, and with a view to develop the community life in the village, the establishment of better living societies and Panchayats with their own habitations i. e. Panchayatghars or Assembly Halls, has been vigorously pushed forward. These two things have been the essential preliminaries to all corporate effort. The pursuit of agriculture by practically all the villagers makes their interests and risks common and gives them a sense of unity which in the face of the forces of disintegration has to be restored and revived. Therefore all the adults of the village, or failing this, one representative from every village family is induced to be a member of the better living society and the Panchayat and this fosters a feeling of unity and comradeship. Selected units or groups of villages comprising 20 or 30 of them are carefully selected preferably round a middle school or dispensary and each district has 12 to 15 such units. After formation, the Better Living Societies are registered, and there is a union of such societies for each unit, a district rural development association for each district, and a Provincial Rural Development Board. The staff consists of a village guide for each village, an organiser for each unit, an inspector for each district, a superintendent for each division and the Rural Development Officer with his assistants at the Head Quarters. The Panchayats obtain the necessary funds for their work partly from the villagers in kind or cash or labour, and the rest from the union in the

* *Congress Government in U. P.*

shape of a contributory grant upto a maximum of $\frac{2}{3}$ of the total cost of an improvement scheme. The 20 or 30 Better Living Societies of the unit form themselves into a Better Living Union with a Union Panchayat for management and this Union co-ordinates the different development activities of the unit. The Panchayatghar functions as the centre of the social and cultural life of the village and prepares the ground for the introduction of adult and girls' education. The Provincial Rural Development Board comprising the heads of the Development Department and non-officials—in all 40—acts as an advisory and co-ordinating body. The Rural Development Officer acts as its secretary and is assisted by two non-official assistants who tour extensively in the districts and keep in intimate touch with the organisers and workers there. Then, an Inspector of the Co-operative Department acts as his technical adviser and looks after the proper organisation of the Better Living Societies. The organisers work under the District Rural Development Inspectors who work under the Divisional Superintendents (10 in number) who guide, direct and co-ordinate the work in each division. The District Rural Development Association of both officials and non-officials with the District Inspector as Assistant Secretary supervises the allotment of funds for various schemes and executes them through a small Executive Committee. Thus, the underlying idea of the whole scheme is decentralisation or devolution of authority, local initiative and non-official control and work with administrative and technical advice and guidance from the Government officials. This organisation was intended to be a temporary one to be replaced ultimately by a co-operative organisation for the whole province. One fifth of the whole province was taken up for the rural development activities.

Within* a short space of about 2 years more than 4,000 better living societies have been registered and over 400 Panchayatghars constructed with fractional contribution from the Government. The Panchayatghar not only provides a

* Congress Government in U. P.

meeting place but accommodates a girls' school, a library and reading room, serves as a store for improved seed and implements, maintains the village medicine chest, and serves as a place for holding meetings, settlement of disputes, and celebration of festivals. "Thus the better living society and the Panchayatghar form the very pivot of the rural development scheme evolved by the Congress Ministry." 380 new seeds stores (till July 1937 they were only 200) for supply of improved seeds have been opened and a provision was made for Rs. 25 lakhs in 1939-40 for grants on commercial basis to construct seed stores; 6½ lakh mds. of rabi seed on sawai and 1 md. of Kharif were distributed and provision was made for 379 distributing centres. Over 2 lakhs of demonstrations were given in sowing improved seed and use of improved methods and implements, conservation of manure and growing of fodder. Rs. 50,000 was provided for the purchase of bulls and 26,060 for maintaining bull-collecting centres. 1500 bulle were distributed and a large number of scrub bulls castrated and cattle welfare units were organised for treatment of diseased animals. About 22,000 improved implements were supplied as also 2,50,000 fruit plants for fruit plantation to improve the health and provide variety in diet and fuel. A large number of nurseries have been opened and packets of vegetable seeds distributed. For fuel and fodder reserves 700 acres had been planted in co-operation with the Forest Department. Fuel plantations have also been started and the removal of disabilities in the establishment of groves under the New Tenancy Act has been provided to encourage fruit cultivation. To increase and improve the facilities for irrigation and drinking water a grant of several lakhs of rupees was placed at the disposal of the district associations and over 800 wells were constructed and 3,000 irrigation wells were bored and repaired. A large number of tanks were made and lifting-appliances introduced. A loan of Rs. 1 crore at 3% with an issue price of Rs. 99 for every Rs. 100 was floated for irrigation, hydro-electric works and road development. In addition the Ministry granted a remission of 90

lakhs in land revenue plus 3 lakhs in famine relief and made provision for additional expenditure of over 130 lakhs for nation building departments. To revive and introduce rural industries a large number of instructors were trained to train over 10,000 people in cottage industries of the various centres and the polytechniques were given substantial grants for this purpose. The All India Spinner's Association was given a grant of Rs. 23,040 for starting 66 spinning classes in the province and special centres for training were opened at Gorakhpur and Partabgarh. Tuitional classes have been opened for various industries under the R. D. Associations and the supervision of the Industries Department, and to push the sale of cottage industries products 70 stores for 37 districts have been opened besides divisional stores at the headquarters. A large number of industrial exhibitions have been held and over 5,000 industrial appliances have been supplied. Special efforts (7 lakhs takavi for purchase of cane crushers) have also been made for the development of gur industry, tanning, poultry, carpentry, paper making, dyeing and printing and soap-making.

To provide better medical facilities 4,000 medicine chests in the R. D. villages have been supplied, 146 Ayurvedic and Unani dispensaries under qualified Vaidis and Hakims and 48 fixed and 16 travelling allopathic dispensaries have been opened. Grants have been sanctioned for eye relief camps at various places, 24 maternity and child welfare centres have been sanctioned and provision made for training dais. To better the general sanitary conditions great improvement has been made with the help of the organisers by digging lakhs of manure and soakage pits, removing rubbish heaps and providing latrines. To combat the appalling illiteracy an intensive drive against adult illiteracy has been given by appointing an Education Expansion Officer, opening two basic training colleges to train teachers and by conducting a campaign against illiteracy with the help of the schools, colleges and universities. A number of adult teachers have been appointed, reading rooms established and libraries

opened to prevent those acquiring literacy from lapsing into illiteracy. The education expansion scheme has planned to establish 50 to, 100 reading rooms in every district area. To push forward girls' education a training-camp at Fyzabad has been opened to train 57 women in welfare work, girl guiding, spinning and carding, teaching and child welfare and maternity. These trained women are now running schools in the district. Outside the R. D. centres, the Education Expansion Officer runs 768 libraries, and 3600 reading rooms and the R. D. Department owns 540 libraries and runs 1,872 adult schools and 317 girls' schools. During 1939 over 3,15,000 persons have been made literate. There is an Adult Education Committee for the province. Lady organisers have been appointed in Allahabad, Farrukhabad, Nainital, Unao, and Sitapur. For propaganda the R. D. Department owns 3 vans equipped with a magic lantern, cinema unit, gramophone records, and exhibits of rural interest for constant touring in the province. Since July 1939 a 30 minutes programme of rural broadcasting in local dialect has been conducted from the Lucknow Radio Station and battery operated 50 radio sets have been installed within a radius of 100 miles for giving talks, rural songs, market rates, and dialogues on rural problems. They serve the districts of Lucknow, Barabanki, Rae Bareilly, Unao, Fyzabad and Sitapur. A magazine in Hindi and Urdu called the 'Hal' is published by the Rural Development Department. To improve the physique of the people a grant of Rs. 1,000 per district for two years has been sanctioned for Akharas and one physical culture and scouting organiser for each district has been appointed. Finally, to develop the rural communications a grant of one lakh in 1939 was sanctioned and with the help of the people cart tracks and roads have been repaired, culverts and bridges made and encroachments in the way removed. A 3 years' programme of constructing 2500 miles of new roads has been framed. Even the Tenancy Act with stability of tenure, relief from anxiety of ejectment and from constant burden of enhancements has the cultivator's welfare

in the background, as also the reorientation of the co-operative movement and reforms in marketing, finance etc. The Ministry contemplated to have statutory panchayats. The village school master and patwari etc. should be imbued with the ideas of village improvement.

In fact "the Congress Party is out for creating a new era for the country-side" and is determined to "raise their general level of life"—"to make life richer, fuller and clearer for villages." They hold that Government have no business to exist if they cannot contribute towards the uplift and enrichment of the people whom they have been appointed to serve and think it their essential duty to devise necessary ways and means and to frame appropriate plans for social progress and reconstruction. Imbued with this noble spirit they have harnessed themselves to the task, and made laudable attempts to remove appalling poverty, to replace darkness by light and "dull and monotonous drudgery and despair by a little hope, relaxation and good cheer" in the rural areas. As the Hon. Premier Pant said in his last budget speech, "There is staggering poverty, ignorance and disease, specially in the rural areas, and accumulated arrears of decades of negligence in this direction call for immediate and effective redress. We want to attack the problem on all fronts simultaneously..... We expect to fulfil our ambition of *creating a bold peasantry which will be our country's pride.*"

Rural reconstruction on similar lines has been carried on by the Congress Ministries in other Provinces also. Though something has been achieved yet much remains to be done. But it is gratifying to note that the villagers have been taught to shake off their inertia and better their lot with their own efforts. The spirit of solidarity and unity has been roused and it augurs well for the future. More night schools for the adults should be opened and Primary education should, so far as possible, be made compulsory and free. It should be made free at least in the sense that, excepting those who are able to pay, no fee or a nominal fee should be charged from those who can not afford fees and

books for their children. We are convinced that the progress of rural areas will depend largely upon our ability to make education in the three R's universal, and that no scheme of rural reconstruction can make much headway without our removing the dead wall of illiteracy and ignorance. The work of the cooperative and other departments would receive a great impetus if it has to deal with people whose intelligence is keener because of the knowledge which they would derive from education. Poverty and disease would diminish by the knowledge of the methods of combating and preventing diseases and by the grasp of the improved processes of production.

CHAPTER XVI

LAND TENURES AND TENANCY LEGISLATION

Introductory:—The terms and conditions upon which land is held and cultivated by the farmer exercise a salutary effect upon agricultural practice and improvements. "The standard of living of the Indian peasant cannot rise until a change in the land system supplies the essential economic basis of more efficient peasant farming. Neither scientific agriculture nor co-operation can make much headway unless we reform the land system, now so serious a handicap to the prosperity of the small farmers."¹ We have described in Chapter V the evil effects of the *land-lord holdings or zamindari tenures* and reckoned them as one of the potent causes of the backwardness of Indian agriculture. We have also incidentally dealt with the controversy, regarding permanent vs. temporary settlements and shown how on the findings and advocacy of Munro the Permanent Settlement was given up together with the landlord holdings in the second decade of the last century; and *Peasant-holdings or Ryotwari tenures* with temporary settlements were established in Madras, Bombay, Assam and Burma on an *individual basis*, and in Northern India, excepting Bengal, Bihar, and Eastern districts of Benares Division, on the basis of *village communities*. The main difference between these two types of land tenure is fiscal: in the Ryotwari tenures *cultivators pay rents direct to the Government*; in the landlord tenures, the *land-lord pays on rental assessments*. According to these two main types of tenures there are either two or three parties interested in the land viz., the Government as the land-owner and the cultivator; or the Government, as the supreme land-lord and ultimate owner; the land-lord as the owner and middleman, and the tenant as the actual tiller and

¹ R. K. Mukerji: "*Land Problems of India*."

possessor of the land with sometimes rights to retain the possession. In England there prevails the doctrine of absolute ownership of land under which, who-so-ever has acquired land by clearance, purchase or inheritance is its absolute owner. But in India there is no doctrine of absolute ownership. The three parties interested in land have limited rights of ownership. The Government here is lord paramount, the land-owner has certain definite rights and holds the land on certain terms from the Government, and the tenant holds it from the land-lord on certain conditions with certain privileges sometimes. Thus, the Indian doctrine of land ownership, as pointed out in chapter V, is that of co-partnership. The share of the landlord in the produce is called *rent* and the share of the state is called *revenue* and the enjoyment of the possession of the land by the tenant depends upon his ability to pay regularly the rent of the zamindar, and the ownership of the landlord depends upon the payment of his land revenue. The Government provides security and protection and takes land revenue as rent.²

In early times, when population was small and security of life and property meagre, tenures were based on the principles of partnership in which the land-lord was a sleeping partner and the terms and conditions of the partnership were regulated by custom. But with the dawn of the modern era all this has changed and now a days 3 dominant types of land tenures are found (a) the *peasant proprietorship* in which the cultivator is also the owner of the land o. g. in Punjab canal colonies (b) the *metayage*: "a system of land holding and cultivation under which the owner and the cultivator or tenant divide in varying proportion the produce of the land, the owner providing the whole or part of the stock and seed, the tenant implements etc.." and (c) the *lease-hold* system under which the cultivator is given the land for a fixed period at a stipulated rent on the condition that no injury will be done to the property. The peasant-proprietorship stimulates the cultivator to be

²Indian Year Book 1919-11.

industrious and self-respecting but it is inefficient and wasteful. The metayage system secures the benefits of co-operative production, profit sharing and payment by piece work. But it involves delay, bickerings and the management is inefficient. The leasehold system develops initiative and enterprise in the cultivator. *An ideal land tenure, while securing fair rents and security of tenure should give sufficient freedom to the cultivator to put the land to the best advantage so that maximum produce is obtained from it.* If the cultivator is oppressed and exploited and can be evicted at the sweet will of the landlord he will never effect permanent improvements in the land nor improve his methods to increase the yield and will use the land in a reckless and wasteful manner causing impoverishment and infertility of the soil.

The Indian systems of land tenure had long suffered from unfair rents, insecurity and lack of freedom to the cultivator to utilize the land in the best possible manner and it has been only recently that the Government have tried to remedy these evils of land-tenures, in the Zamindari provinces especially, through tenancy legislation.

Land revenue: A historical resume: We have seen in Chapter III that the village, "the economic and social cell" of the country was governed by the village community which administered through the *Panchayats* the rights of the cultivators *inter se* and maintained "its absolute proprietorship over the meadows, pasture lands, tanks and irrigation channels, and the least encroachment of such common rights by a cultivator was resented and punished by the 'village assembly'"³ The peasant proprietor was protected by the village community which maintained a harmony between the individual and communal rights, adapted agricultural practice to social and geographical conditions and, through the strip system of land holding and exchanges, provided equality of opportunities to all the cultivators of the village. Although the system originated

with the earlier clan or tribal organisation of the aborigines, the *panchayat* system, an essential concomitant of the village communal organisation, spread to all parts of India with an increase in the population and the necessity of securing the rights of cutting fuel and grazing to the individual cultivators in the waste lands, meadows and pastures and irrigation facilities. This communal ownership of the village wastes and meadows persisted through centuries. The village community also maintained the "rights of entail, pre-emption and pre-occupation" and together with the maintenance of the rights in commons and wastes, protected small scale farming against the invasion of capitalistic interests and was responsible for the collection of village revenue.⁴

From very early times the kings and rulers in India have taken a share in the produce of land which was $\frac{1}{6}$ in normal times according to Manu and in times of emergency it rose to $\frac{1}{4}$. This system of produce-revenue was equitable because the share of the king varied according to the crop and obviated the necessity of suspensions and remissions; but it suffered from a number of defects, and, with the increase of population and extension of cultivation, it became very difficult to collect it. Gradually, therefore, it was superseded by money payments, and the commutation grew apace with the Mohammedan conquests. In the Hindu period, rule by families prevailed, each family head being a member of the village council under the presidency of the village headman. The headmen of ten villages formed another council under a *Chaudhary* and ten *chaudharies* representing 100 villages formed a *pargana*, and ten *parganas* formed a supreme council under a *Raja*. The headmen settled the total quantity of land revenue with the *Raja* and distributed it among the families. Thus the collective system of assessment from the village estate prevailed till the Mohammedan conquest. "Even in the later days of the Moghul

⁴ R. K. Mukerji : *Economic Problems of Modern India*.

Empire collective assessment superseded the methods favoured by Sher Shah and Akbar."⁵

The Mohammedan kings, on their conquest, kept a portion of the land to meet the expenses of the royal households. These reserved lands were called *khalsa* and the remainder, called *jagir* lands, were split up into military circles and given to *Talugdars* and *subas* who paid *Khiraj* or tribute and contributed soldiers in war. These functionaries in turn distributed their allotments to landlords under them and this produced a heterogeneous and large number of superior and inferior landlords. This system was modified by Akbar and his successors and the "farming system" was introduced, in which villages were leased out to contractors or "farmers" on the payment of a fixed quantity of produce or cash and these farmers in turn made their own contracts with the cultivators. Then the commutation of produce-revenue into cash payments began in a methodical way during the time of Timur and was again attempted during the regime of Sher Shah. But it was during the reign of Akbar that a really systematic and detailed settlement was carried out under the able guidance of Raja Todar Mal. After a careful survey and measurement, the land was classified into four categories with regard to its fertility and the share of the state was fixed at $\frac{1}{3}$ of the gross produce. The term of the settlement was fixed at 9 years and option was given to pay in cash on the average prices of food-stuffs in 19 years preceding the settlement. Regular records and accounts were instituted and the essentials of the Hindu customary laws were reduced to a coherent system.

On the death of Aurangzeb the central authority weakened and became impotent to control the outlying provinces; and as a consequence the petty chiefs, assignees and governors began to show a spirit of insubordination and revolt. To ensure a regular flow of income to the Imperial treasury, therefore, the system of "revenue farming" was introduced under which the revenue farmer or contractor for collection of revenue

paid 9/10 of his collection and retained 1/10 for his remuneration. Later on the right of collecting revenue from a certain district or pargana, began to be disposed of by public auction to the highest bidders, who had to pay the fixed amount in lump sum to the Imperial treasury and retained the surplus collection. The revenue farming was first introduced in Bengal and therefrom it gradually spread to other provinces, but its effects were not uniform. In Bengal, Bihar and Orissa the effects were lasting and permanent, and the revenue farmers became zamindars; in the United Provinces and the Punjab, however, they only acquired certain overlord rights. Moreover, the office of the revenue farmer was not hereditary in the beginning but with the relaxation of the control of Imperial authority the office became hereditary; the revenue farmers consolidated their position with the demoralisation, disorganisation and dislocation of the central authority and began to levy a host of *abwabs* or multifarious exactions on the peasants. During the period of insecurity that followed the fall of the Moghul Empire, therefore, the revenue farmers acquired proprietary rights by appropriating the waste lands of the village in addition to the *sir* lands and buying out the weaker peasants by consent or force. The disorganisation of the revenue administration aggravated the heterogeneity of land tenures and rights and led to the discontinuance of regular surveys and assessments. The village communities withstood successfully the ravages of the revenue farmers in South and West, but in Northern India under the crushing burden of *abwabs* and rack-renting and the ever-increasing power of the assignees, farmers and petty chiefs the village communities gave way before the coming of the British rule. In the Madras and Bombay Presidencies they broke down under the Ryotwari system in the middle of the 19th century.

Thus, by 1765 when the right of collecting revenue from Bengal, Bihar and Orissa was granted to the E. I. Company by Shah Alam, the revenue farming system was in vogue and by the time of Lord Cornwallis the revenue farmers had con-

solidated their powers and rights in such a manner as to be mistaken for zamindars or landlords with proprietary rights in their estates. To put the land revenue system on a sound footing and applying the notions of the English doctrine of absolute ownership in the land, the Company recognised the rights of the revenue farmers as owners of their estates. Short term settlements, oppression and extortion of the cultivators and irregular and meagre collections became rampant. The introduction of Permanent Settlement by Cornwallis in 1793 in Bengal and Bihar and his recognition of the assignees, farmers etc., as zamindars like English landlords deprived the peasant or khudkast ryot of his customary rights of freedom from eviction so long as he paid the rents, and, of privileges of homestead plots, wastes and meadows, ponds and services of the village servants. These customary rights and privileges were taken away gradually in every district and completely obliterated. "The village community was broken into pieces, the peasants were disorganised and the zamindars appropriated and distributed all village meadows and waste lands among the cultivators on rent, breaking down customary rights in pasturage and neglected *bundhs*, tanks and irrigation channels to such an extent that agriculture and the condition of live-stock were seriously jeopardised." In the absence of a regular and systematic land revenue system in this period of pillage, plunder, wars and chaos, the task of the British Land Revenue administrators became very difficult.⁶

In recent times, therefore, the land-lord estates had arisen either from the recognition of revenue-farmers as land-lords by the British (Bengal, Behar, Eastern United Provinces. North Madras and parts of Bombay); or from territorial chiefs whose tributes were converted into revenue (Madras and C. P.) or from grants of jagirs for services to the state (Oudh Taluqdars) or from acquisition through purchase or mortgage of estates by bankers

⁶ See Chapter V for a detailed account of Land Revenue and settlement under E. I. C.

or capitalists.⁷ This emergence of land-lordism caused the decay of the village community and of the peasant proprietor and led to the creation of a class of rent-receiving middlemen and capitalists who tyrannised over the cultivators. The Permanent settlement also caused a subdivision and subinfeudation of rights in land and sub-letting which resulted in rack-renting. A large number of illegal cesses and dues, unjustifiable enhancements in rents, absence of permanent improvements effected by the land-lords, deterioration of the economic position of the small-holders and the creation of agricultural serfs—these were some of the glaring evils of the Land-lord tenures.

Later on the Permanent Settlement was also extended to the Benares division in U. P. and led to similar evils. A slight variant of the land-lord tenure was later on introduced in C. P. where the Malguzars of the Mahratta period were converted into proprietors, though their status was inferior to the Bengal zamindars and the settlement was temporary. In Ondh also the small chiefs, jagirdars and revenue farmers were converted into proprietors and granted special privileges after 1857. Then in Madras and later on in Bombay in an error the village communities were walked over and the Ryotwari tenure with periodical revision was introduced. The assessments were pitched very high and caused distress in the peasantry. In the rest of U. P. the Mahalwari tenures were introduced with temporary settlements. Under the permanent settlement ten-elevenths of the land-lord's collection from tenants was fixed as land-revenue in perpetuity, and the right of full proprietorship was made dependent on the payment of revenue, the failure to do which led to the sale of the estate. The Government also reserved the right to introduce reforms for the protection and welfare of the dependent tenants, cultivators, and taluqdars. Unfortunately the rights and privileges of the ryots were not defined and the revenue was collected by the agents of the Company with great rigour and

⁷ B. K. Mukerji: *Land Problems of India*.

harshness. This caused a number of evils which we have described above. In the beginning the landlords felt a great difficulty in paying such a high assessment but later on through illegal exactions they more than made good their losses. The ryots were ruthlessly rack-rented and placed at the mercy of landlords and neither the Government nor the zamindars cared for them. The land revenue was also inequitable and inelastic. Suspension and remissions were also not provided for in the permanently settled tracts.

Under the temporary settlement the revenue is fixed temporarily and is revised periodically. A cadastral record i. e. the record of rights and interests in the land and of the village map to determine the amount of revenue is prepared after a field-to-field survey. Then the land is classified according to fertility and the revenue is fixed on the basis of the average price of the past 19 years of the principal produce grown. Then the shares of different co-sharers are determined and the assessment lasts 30 or 40 years. For convenience the revenue is collected in instalments and in case of default the holding is ultimately sold. On account of periodical revisions the Government shares in the vicissitudes of the cultivator's fortunes and in bad years grants relief by suspension and remission of revenue on the condition that the rent is also remitted and suspended in suitable proportion.

Land Tenures in India

Land tenure means the system of holding land by the cultivator from the Government or the landlord and implies the determination of the responsibility for the payment of land revenue or the form of settlement and interests and rights in the land and the unit of assessment. They are far from simple, too complicated and intricate and show a great variety which is due in the main to the chequered social and political history of the different parts of the country. Broadly speaking there are three main types of *proprietary* land-tenures prevalent in the country viz: (a) the *Zamindari or land-lord tenures* in which

a single individual or a few joint land-owners are responsible for the payment of collective land revenue in lump sum to the Government on the entire estate; (b) the *Mahalwari* or joint village tenures comprising mahals or village estates owned by a band of co-sharers or village communities who are responsible *collectively and severally* for the payment of land revenue; and (c) the *Ryotwari* in which the holders of individual single estates in a village are severally responsible for the payment of land revenue.

The *Zamindari* system of land tenure prevails in Bengal, Bihar and Orissa, United Provinces, North Madras, and some parts of Bombay and C. P. Under this tenure one land lord is made responsible for the payment of land revenue on the entire estate. He acts as a middleman between the Government and the ryots. The settlement is permanent in Bengal, Bihar, North-East Madras and Benares division of U. P. and it is temporary in Oudh and in some parts of Bengal not permanently settled. In the first case the revenue demand is unalterable and fixed in perpetuity and in the second case it is revised periodically after 20, 30 or 40 years.

In U. P. the British were ignorant of the joint tenure of land in force in the Benares division and they dealt with one of the chief co-sharers or some other prominent person on a permanent basis. But in Oudh there is an agreement with the taluqdars or chiefs for payment of revenue on a temporary basis. The taluqdar has no absolute right over his estate as the Zamindars in the permanently settled districts have and out of his rent collections, he pays to the Government a fixed sum after a deduction for his cost and a sum for his maintenance at the pleasure of the Government. The settlement is revised after a period of 30 years. The main forms of the proprietary tenures in U. P. are *single zamindari*, *joint Zamindari*, *Pattidari* (the estate being divided among the holders and each holder holds his share separately); *Bhaiyachara System* (land being individually held by the proprietors and the liability for land

revenue is assessed according to the actual area possessed by each holder); and Imperfect Pattidari or Bhaiyachara in which the land is partly held in common and partly in severalty. Where it is held in common a lambardar is responsible for payment of revenue.

The *Mahalwari* tenure obtains in the rest of U. P. and Punjab and C. P. Here the Government enters into an agreement with the co-sharers of the estate or village communities who are jointly and severally responsible for payment of land revenue. The settlement is for 20 or 30 years. An intermediary is usually appointed by the Government who is called Lambardar in U. P. and Malgujar in C. P. and he is held responsible for payment of land revenue on behalf of the village community. About one-half of the net assets are taken by the Government.

In the *Ryotwari tenure* the state deals directly with the individual ryots and no middlemen are recognised. The cultivator pays revenue directly to the Government. After a careful survey, the revenue is assessed according to the fertility of the holding on each occupant. All the villagers of the ryotwari village are subject to the village officials and enjoy the services of the village artisans. There are different systems of ryotwari tenure in Madras, Bombay, Assam and Burma. It does not obtain in the United Provinces. Here the incidence of the revenue comes to $1/5$ of the produce, as compared with 25% in the Permanently settled areas and 50% in the Mahalwari and temporarily settled zamindari tenures. The incidence of land revenue, therefore, varies according to the tenure, settlement and the character of the holdings.

Sub proprietary and Cultivating Tenures

Sub-proprietary tenures are those in which the holder has a privileged position like the zamindar except that he does not manage the whole estate. He is the full owner of his holding and his tenure is heritable, transferable, and permanent and the payment is fixed. Such are the tenure holders in Bengal who were granted privileged position in

1885. The *pattidars* of Bengal were given a permanent managing lease for a portion of the estate by the zamindars. Sub-proprietary tenures are also found in C. P and Oudh.

Among the *cultivating tenures*, the most important are (a) the *permanent tenure holders*; (b) *Fixed rate tenants* (c) *Ex-proprietary tenants* (d) *Occupancy tenants* (e) *Statutory tenants* and (f) *tenants at-will*.

The Agra Tenancy Act of 1901 made provision for the first four of these and for non-occupancy tenants. The *permanent tenure holders* have rights and privileges similar to the zamindars and are sub-proprietors. Their rights are heritable and transferable and they can sell and mortgage their property. The rates of rent payable by them are fixed in perpetuity and they are found in the permanently settled areas of the Benares division. They cannot be ejected nor can their rent be increased.

The *fixed rate tenants* are also sub-proprietors and are similar to the permanent tenure holders in that they are also found in the permanently settled areas and enjoy the rights to sell or mortgage their property; their rights are also heritable and transferable and the rates of rent to be paid by them are fixed once for all. Their peculiar feature is that the rent payable by them increases or decreases proportionately to their increased or decreased holdings. They cannot be ejected, nor can their rates of rents be enhanced. The 'absolute occupancy tenants' of C. P. hold a similarly privileged position.

Ex-proprietary tenants are those who were formerly proprietors but have now lost their estates through debts etc., except the *sir* which they cultivate and on which they pay rent at reduced rates than other cultivators in the locality. Their rights are not transferable though heritable. Because of their acquiring ex-proprietary right in their *Sir* (the land which they used to cultivate while they were zamindars), they are called *ex-proprietary tenants*.

Occupancy tenants connote those privileged tenants who after a continuous cultivation of the same plot for twelve years

acquire a fixity of tenure in them. Their rights are also heritable but not transferable except on certain conditions. They cannot be ejected from the land and their rents cannot be increased except by mutual agreement or by an order from the Court. The enhancement in rent, moreover, cannot be more than one or two annas in the rupee and can be effected only once in ten to fifteen years. Besides these the other privileges of the occupancy tenants are that their rights of improvements in land are protected against an increase in rent; that concessions to these tenants must also be given at the time of suspension and remission of land revenue demand and that the cattle, seed, grains etc., are exempted from attachment in distraints for rent. Thus, they enjoy fixity of tenure, fair rents and freedom of transfer. Occupancy rights on tenants were conferred first in Bengal and Agra by the Tenancy Act of 1859 but when the zamindars evaded the conferment of this privilege the Act was amended in 1885 in Bengal and many restrictions were imposed in 1901 in Agra to prevent the defeat of the provisions of the law by the landlords. Such tenants are also found in C. P., Oudh, Madras, Punjab and Bombay.

Statutory tenants were created by the Agra Tenancy Act 1926. Those cultivators who pay rent regularly and cultivate a field for full one year cannot be ejected from the land during their life time and their rent cannot be increased within 20 years and without sufficient reasons. Their heirs also inherit the right of holding the land for five years after their death or upto the expiry of the lease, whichever is longer.

Non occupancy tenants hold land under long and permanent leases. *Tenants-at will* have no right in the land and can be evicted at any time at the sweet will of the zamindar. The Agra Tenancy Act 1926 aimed at converting all these tenants into statutory tenants but the landlords have not allowed them to cultivate the land for full one year unless they agree to give up the statutory rights. Their condition is very miserable indeed.

In Oudh the Act of 1886 created statutory tenants who could hold the same land for seven years at the same rent. Under the Amending Act of 1921 they were entitled to receive a lease for ten years and could get the lease for every ten years if they agreed to pay the enhanced rent settled by the court or the Zamindar. After their death, their successors could hold the land for a further period of five years after which they could be asked by the Zamindar to give up the land. On the whole, however, the tenants of Oudh possess less rights than their brethren in Agra. The hold of the Oudh Taluqdars on their tenants is very strong and many times they have successfully withheld the improvement in the rights and privileges of their tenants. Under the consolidating U. P. Tenancy Act of 1939 all non-occupancy tenants at the time of coming into force of the Act have become *hereditary tenants* except tenants-at-will or *sir* tenants. But a large portion of the *sir* tenants have also become hereditary tenants.

Tenancy Legislation

Before the destruction of the rural and domestic industries, the enforcement of individual rights in land and the establishment of the courts of justice under the British rule, the relations between the tenants and the landlords, as we have seen in chapter V, were governed by custom. The cultivators enjoyed a number of customary rights and privileges which were jealously guarded by the village councils against encroachments or depredations from inside or outside the village. Before the establishment of a strong centralised administration maintaining law and order the relations between the tenants and zamindars were feudal. The landlord was dependent on the tenants and sons for the security of his person and property and the tenants even performed *corvée* or begar labour on the farm of the landlord. Therefore the relations between them were very cordial and customary rents were paid in kind and later on in cash. With the unloading up of the country by railways and metalled roads and with the increase in population on improved security of life and pro-

perty and with the downfall of the handicrafts industries and consequent pressure on the land, its demand increased very much. The landlord therefore began to give out land to the tenants on a competitive basis. He, who could give the highest bid, would get the land. Thus custom gave place to competition and there was absolutely no security of tenure. Ejectments and evictions dependent on the sweet will of the zamindars became rampant and therefore the cultivators had no incentive to effect improvements in the lands or to put their best efforts in their cultivation. The ruthless exploitation of the lands caused the impoverishment of the soil and national income was also threatened. Therefore after the mutiny in 1857 when the Parliament began to take a direct and active interest in the administration of the country tenancy legislation began to be passed with a view to protect the cultivator against rack-renting and confer on him the blessings of fixity of tenure, freedom of transfer and fair rents and to secure to him through legislation his customary rights.

In a predominantly agricultural country like ours, a sound land policy is the *sine qua non* of a stable economic development. The relations between the tenants and the landlords must be characterised by sweet reasonableness and harmony without which it is impossible to put the land to the highest productivity. For inducing him to effect improvements the cultivator must have security of tenure; to improve his standard of living and to finance his industry he must have the lion's share of his industry through fair rents and to be credit-worthy he must have a freedom of transferring his land to a certain extent. Unrestricted freedom of transfer, as we have seen, has landed him in a quandary and has stimulated indebtedness. According to Dr. Mukerji the series of tenancy legislation since 1859 in Bengal seeks to give a legal force to the customary rights of the cultivators which the Permanent Settlement left unascertained or actually obliterated. The first reform aimed at was the conferment of security of tenure and restricted transfer. For this

purpose the Tenancy Act of 1859 in *Bengal and Agra* provided for the security of tenure and protection against arbitrary enhancements and illegal exactions by recognising occupancy status for every tenant who had cultivated the same land continuously for twelve years. But the object of the Act was defeated by the tactics of the landlords who prevented any tenant from holding the same piece of land for 12 continuous years. Thereupon the Act of 1859 was amended in 1885 which bestowed occupancy status on any tenant who cultivated not the same piece of land but some land in the same village for twelve years continuously. Now 80 to 90 per cent of the tenants in Bengal enjoy this right. The non-occupancy tenants also cannot be ejected except by the decree of a court and their rents cannot be enhanced within five years. In 1928 the occupancy tenants were given the right to erect houses and tanks, and later on the transfer of holding from one tenant to another was allowed on payment of 20 per cent of the purchase money to the landlord. The levying of an unduly high rate of *salami* on the sale of land by the ryot was thus stopped, but some landlords still charged *salamis* and *atwabs*. Therefore in 1937-38 an Act was passed to abolish this *salami*; as also "the landlord's right of pre-emption, which has been conferred on co-sharer ryots" and "the privilege given to the landlord of recovering arrears of rent by summary process of auctioning the lands of the tenants." The rate of interest on arrears of rent was also reduced from $12\frac{1}{2}$ to $6\frac{1}{2}$ per cent.⁸ Illegal exactions and cesses have also been abolished and the tenant has been given the right to recover his diluvial land within 20 years on payment of only 4 years' rent. The under-ryot has been given rights like occupancy tenants. The Bengal Land Commission of 1939-40 under the presidency of Sir Francis Floud has recommended the State purchase of land together with other reforms to remove the defects and evils of Permanent Settlement.

The rule of the payment of 20% on the purchase price of the land to the landlrd on sale of his land by a tenant was also adopted in *Bihar* in 1934, but illegal exactions and Nazrana, Salami etc., were still prevalent in *Bihar and Orissa*. To stop these evils the Bihar Tenancy Act of 1938 reduced the rents to the level of 1911, abolished the recovery of rents in kind, exempted the enhancement of rents for 15 years and cancelled all enhancements except those on the grounds of improvements effected by the zamindars, reduced the interest on all arrears of rent to 6½%, granted absolute right of transfer to the tenants, made the levy of illegal exactions an offence punishable with imprisonment; withdrew the zamindars' right of claiming damages for arrears, prevented eviction except from lands rendered uncultivable and conferred hereditary rights on occupancy tenants and the right to build houses, dig wells and plant trees. The zamindar has got the simple right of getting rents from the occupancy tenants now. This Act has reduced very substantially the number of non-occupancy tenants. Similar provisions have also been made in the Orissa Tenancy Bill 1938 which has been passed but has not received the assent of the Governor. Similarly the Madras Land Estates (Orissa) Act of 1938 has not received the assent of the Governor-General.

The Bengal Tenancy Act of 1885 served a model for tenancy reform and legislation in other provinces also, but the basis of the occupancy rights is not similar in them. In the land-lord estates of *Madras* every ryot holding other than home farm or the *Sir* land of the proprietor at the commencement of the Estates Land Act of 1908 and "every ryot admitted by the land-lord to the possession of ryoti land," has a permanent right of occupancy. In *Bombay*, the special Act of 1880 dealing with the khots protected the old residential tenants in the same manner as occupancy tenants elsewhere."⁹ In the *Central Provinces* the continuous cultivation of the same land for twelve years as

elsewhere conferred occupancy rights on the tenants but as in the United Provinces, it proved ineffective against arbitrary and artful ejections of the tenants. The accrual of occupancy status was deliberately made very difficult by the land-lords and good deal of litigation between them and the tenants was the order of the day. Later on, therefore, occupancy right was permitted to be purchased at $2\frac{1}{2}$ times the annual rental. But the Tenancy Act of 1920 made every tenant, irrespective of the period of his occupation, an occupancy tenant or a tenant with a permanent occupational right. It recognised two classes of occupancy tenants with limited transferable rights : the absolute occupancy tenants and occupancy tenants. The former can lease, mortgage or sell their holdings subject to the *malguzar's* right of pre-emption; while the latter can transfer only to co-sharers and to certain heirs but their lands cannot be sold or attached for a decretal amount although they can be ejected for arrears of rent by revenue courts. The Provincial Government has recently introduced a bill to alter radically the tenancy system. In Madras also the Congress Ministry on the recommendations of the Estates Land Enquiry Committee introduced a bill in 1939 which provides for unalterable rent and for the enforcement of the rights and liabilities of the tenants and the Zamindars on this basis. The bill has also declared the rights of the tenants to the land and the right of the landlord over the standing crop. With a view to confer permanent rights on tenants-at-will and to protect even permanent tenants against illegal levies and forced or poorly paid labour in *inam*, *khoti* or *talugdari* villages, the *Bombay Tenancy Bill of 1938-39* was introduced by the Congress Ministry. "The bill seeks to confer the benefits of permanency of tenure, reasonable rent, freedom from liability to pay cesses and levies other than rent, and compensation for improvements on certain classes of tenants, but the area so affected amounts to only 8 or 9 per cent of the cultivated land in the province." In the *Punjab* according to the Act of 1887 occupancy rights can be acquired only by such tenants as have paid the Government assessment only for two

generations but have not paid either rent or services to the proprietor.¹⁰

United Provinces:—The rent Act of 1886 in *Oudh* created statutory tenants who could hold the land for seven years at the same rate and bestowed occupancy rights on those tenants who had proprietary rights formerly but had lost them. Subsequently the occupancy status was also extended to such exproprietary tenants whose proprietary rights had been transferred by sale or execution.

The Statutory tenants could be ejected or their rents could be increased after 7 years. Ejectment had been rampant and there was no escape from it until the tenant accepted the increase in rent at the behest of the land-lord. Agriculture being the mainstay of these thickly populated parts of the province the demand for land was keen. In fact the *Oudh* tenants are the weakest. It was in regard to such tenants particularly that Dr. Mukerji sounded a warning in his 'Land Problems of India' in 1934 in the following words "The uneconomic holding, the absence of full proprietorship of the cultivators, and the use of semi-slave hired labour are incompatible with the efficient intensive cultivation which is the great advantage of peasant farming and without which an increasing population must stay content with a single meal, thin gruel, and a loin-cloth. The faint rumblings of peasant class-consciousness, already audible in some parts of India, challenge the present agricultural regime. No man should suffer imprisonment with hard labour in $\frac{1}{8}$ of an acre of land. No class should be merely a "mud-sill on which a super structure may rest;" the class which maintains the race should not be the scape-goat of its burdens and penalties." True it is, that under the amending Act of 1921 life-tenancy was granted to the statutory tenants who form the bulk of the *Oudh* tenants and that the rent could be enhanced only once in ten years and their heirs could hold the land after succession for five years. The settlement was revised after every

20 years' period and the statutory tenants could get a lease after ten years provided they agreed to pay the enhanced rent to the Taluqdar. But the real solution of the evils "of rack-renting, nazrana, and harassing litigation" prevalent among the statutory and other non-occupancy tenants lies in the replacement of life tenancy by permanent and heritable occupancy status. The lot of such tenants is extremely miserable and illegal and obnoxious exactions and levies are too many : "*aurat bhagai, bakra, shadi, Khoonta gar hai, chaukhat rakhai, ghaswara Kharehara singhauri and begar.*" Some of the Taluqdars keep a private record in which the real rent is 5% higher than the Patwari records.

In the Province of Agra : the Tenancy Act of 1901 imposed certain restrictions to prevent the defeating of the law of 1859, conferring occupancy right on 12 years' continuous cultivation of the same land on the tenant, by the capricious tactics of the landlord. The accrual of occupancy right on the expiry of 12 years' period of continuous cultivation was rendered very difficult in Agra unlike Bengal. It was gradual and precarious and involved litigation because the local custom was interpreted by the courts in deciding the incidents of occupancy status very crudely, and the zamindars of Agra occupied a superior social status, on account of military tradition to the tenants. The 12 year rule was very mischievous and meant an eviction of the tenant at the end of the 11th year ; hence, it afforded little protection to the tenant against the arbitrary eviction of the landlord. With the increased pressure of population on the land its value and demand increased and the landlords to realize enhanced rents prevented by all means possible the acquisition of the occupancy status. It caused an inevitable friction between the landlords and the tenants and all the obnoxious evils of absentee landlordism ensued. The Famine Commission of 1880 had drawn pointed attention to this defect of the tenancy reform. As Dr. Mukerji has put it "the great mistake of the tenancy reform has been that the right it created depended upon a time limit and therefore upon the forbearance of the superior proprietor to exercise

his power of eviction before it matured." Hence, the Act of 1901 was passed to provide help to the tenant to acquire fixity of tenure by preventing the landlord from evicting him capriciously. But the Act of 1901 failed to achieve its object. Between 1903 and 1922 only 13% increase took place in the occupancy area and that too was due to fraud, mistake and accident.¹¹ Harassing litigation grew in volume day by day and the feelings between the two parties were embittered. The non-occupancy tenants were entirely unprotected and subject to rack-rent etc.

When the Act of 1901 could not secure fixity of tenure and immunity from illegal enhancements and exactions to the large number of tenants in the Province and antagonism between the landlord and the tenants grew more intense, the situation was aggravated after the Non-co-operation Movement of the Congress and the peasantry became class-conscious. Therefore, the Agra Tenancy Act of 1926 was passed to check the growing tide of discontent and distress. The old rule of 12 years' continuous cultivation for accrual of occupancy rights was abolished; every tenant-at-will became a statutory tenant with a life tenancy heritable by his heir for five years after his death, and the Act provided for the continuance of the old occupancy tenants and for the purchase of occupancy rights by non-occupancy tenants from the landlord or for its receipt as a gift. The rents of the statutory tenants could be increased only after 20 years (once in one settlement of 40 years) and they could be revised after the tenth year by special officer for enhancement. This makes for fair and equitable rates of rent. The Act, however, extended the *sir* rights of the landlords excessively. Suspensions and remissions were also provided. But the evils of Nazrana, non-transferability etc. were not completely obliterated. The Act was in fact a compromise and half-way measure, and permanent improvements were still not stimulated.

In the meantime the world economic depression (1929-31) enveloped the cultivators in its grip and prices of primary pro-

ducts fell by 50%. The balance of the agricultural economy of the Province could not be maintained. The high rentals inflated by the higher prices of agricultural produce during the late war could not be paid by the tenants. Remissions and suspensions of land revenue and rental could not ease the situation and with the worsening of the economic position of the tenant and increased incidence of debt and rent, the demand for a drastic change in tenancy laws became very pressing. The Indian National Congress under the leadership of Pandit Jawahar Lal Nehru sounded grave warning and portents of a coming storm were visible on the horizon. The Congress started the Civil Disobedience movement and later on in U. P. a no-rent camp was also organised. Later on a Sub-Committee of the Provincial Congress Committee made a detailed investigation of the agrarian problems and in its report suggested a number of radical reforms to meet the situation. In 1933-34 the land-lord ridden Provincial Government undertook a series of ameliorative measures to relieve the rural masses but they failed to rescue the tenantry from its miserable condition.

After the inauguration of the New Constitution, the Congress formed the ministry in 1937, and true to their manifesto promises, they sponsored a bill to introduce drastic and radical changes in the existing land laws of these Provinces. While stating the Government Policy, the Hon. the Premier on the 2nd of August 1937 said "there is no more important or urgent problem than the readjustments of the relations between the Government, the landlord and the tenant on a basis which will make the relief of the suffering peasantry and the promotion of their prosperity the first and foremost consideration. We consider that measures of real and substantial relief to them have been postponed too long and that such measures as have hitherto been taken have hardly touched the root of the problem of rural indebtedness." After a heated controversy and a long debate the U. P. Tenancy Bill 1933, introduced on 20th April, was passed by both Houses of the Legislature by 4th October

1939 and received the assent of the Governor on 6th December 1939 when the Ministry had resigned.

The U. P. Tenancy Act 1939 is a consolidating measure applicable to the whole of both Agra and Oudh with the exception of a small area in Dehradun and Mirzapur districts, and it repeals the Oudh Rent Act 1836 and the Agra Tenancy Act 1926. Before the passage of this Act with a view to avoid the dangers and hardships of proceedings for ejectment, recovery of arrears, enhancement of rent and execution of decrees to the tenants orders were issued by the Board of Revenue to stay all suits and proceedings for the recovery of rent of kharif 1344 F. and previous years and also of Rabi 1344 F. in areas where remissions for agricultural calamities had been given. Suits for ejectment and enhancement of rents and execution of decrees in such cases were also stayed. Later on these orders were regularised by the U. P. *Stay of Proceedings Act 1937* which was further extended by an Amending Act of 1938. Minor changes were also effected in the Oudh Rent Act, 1836, Agra Tenancy Act 1926 and the U. P. Revenue Act 1901 to enable the statutory tenants and their heirs to apply at settlement for commutation and abatement of rent and to extend the period for such application. Moreover, since the depression in prices rent had been remitted by executive orders, the legality of which was challenged by Zamindars. On the High Court holding such remissions *ultra vires*, the *Regularisation of Remission Act* was passed to prevent land-holders from challenging the legality of Government remissions of rent given on account of slump. This Act had also been declared *ultra vires* by the High Court. According to the Act of 1886 and 1926 remission in revenue had to precede remission in rent and in Oudh the rent remission could not be higher than the double of revenue remission. It meant that even in periods of great distress and calamities some rent had to be paid by the tenants. After the devastating floods of 1938, therefore, the *U. P. Rent and Revenue Act (1938)* was passed to provide that remission

of rent or its suspension should precede the remission or suspension of revenue and that in both Oudh and Agra the remission in rent should be proportionate to remission in revenue. Rules for grant of relief during agricultural calamities were also framed. All these provisions were later on incorporated in the U. P. Tenancy Act 1939. Another important Act passed by the Government was the *U. P. Stayed Arrears of Rent Act* which remitted "all arrears of rent due from tenants, (except those the rent payable by whom in the year 1344 Fasli was more than Rs. 500, or who in the year 1937 were assessed to income tax or who were paying a land revenue of more than Rs. 250 annually), in respect of kharif 1344 Fasli or prior fasals and for rabi 1344 Fasli in areas where remissions for agricultural calamities had been given." 12

The chief features of the U. P. Tenancy Act 1939 :—
 1 *Hereditary rights for tenants:—* With a view to confer and increase security of tenure to the tenant his interest in the land is made heritable like an occupancy tenant. *All statutory tenants and heirs of statutory tenants in Oudh and Agra, tenants in Oudh with proprietary or underproprietary rights in the village, pahikast or non-resident tenants of Oudh and tenants of Tea garden and alluvial Mahal, become hereditary tenants.* All persons who cultivate land from a landlord in future shall become hereditary tenants from the beginning. A mortgagee of proprietary or under-proprietary rights, a grove-holder, a rent free grantee or grantee at favourable rate of rent is not a tenant. This hereditability will not accrue in grove-land, pasture-land, land covered by water and used for growing singhara or the like, land cultivated casually in the bed of a river or reserved for public purpose or utility or land for military encamping, or within railway, canal, cantonment, Improvement Trust or forest boundary. *Even in case of Sir land, tenants have been given security of tenure for five years. Thus excepting a sub-tenant or tenant of Sir all others get hereditary rights.*

12 : *Congress Government in U. P.

2. *Curtailement of Sir Rights of the Landlord* :—*Sir* has

been defined as all land which was *Sir* at the commencement of the Agra Act of 1926 or Oudh Act of 1885 and land which was *Khud kast* and is demarcated as *Sir* under this Act. Strictly speaking *Sir* means home farm but it has come to mean a special preserve of the landlord for his own use, in which the tenant cannot get a security of tenure. The landlord got this *Sir* land largely extended at the time of the Oudh Rent Act 1921 and the Agra Tenancy Act 1926 and got the right of "getting *Khud kast* of 10 years' standing recorded as *Sir* provided his *sir* would not exceed 10% of cultivated area of the land-lord in the village. The area recorded as *Sir* in Agra and Oudh in 1935-36 was 49'36 lakhs and 7.24 lakhs acres and approximately 25% of the *Sir* in Agra and 39% in Oudh had been let out to tenants. Since the Agra Tenancy Act of 1926 no less than 1,077,000 acres in Agra and since the Oudh Rent Act of 1921, 408,000 acres in Oudh had been gained as *khudkasht* at the expense of the occupaney tenancy in Agra and statutory tenants in Oudh." ¹³ *The Act of 1939 has limited the sir land to 50 acres only. In case of landlords paying more than Rs. 25 local rate or Rs. 250 as land revenue, all lands which before the Agra Tenancy Act 1926 and Oudh Rent Act 1921 were not Sir, have ceased to be Sir. Of the remaining Sir, of such land-lords, that portion which at the commencement of the Act is let to tenants ceases to be Sir, and the tenants become hereditary tenants. No reduction or alteration is made in the Sir of petty landlords paying Rs. 25 or less local rate or Rs. 250 or less land revenue whether that Sir was acquired after the Acts of 1921 and 1926 or not, or whether it is sub let or not. The tenants of Sir of such petty land-lords will not get hereditary rights but will retain possession of their holdings for five years. Thus, there is no reduction of Sir of a land-lord if it is less than 50 acres, and if it is more than 50 acres, only 50 acres can be retained. Even in the 50 acres Sir of the land-lord paying Rs 25 local rate or Rs. 250 land revenue the tenants*

will not get hereditary rights if such lands were Sir before the Act of 1921 and 1926. There is no provision in the Act for an increase in Sir area, but a change in the actual fields which are Sir can be made, and a land-lord having khudkasht and letting part of his Sir, can convert the whole or a part of his khudkasht into Sir and grant hereditary rights to the tenants of an equal area of his Sir. Hereditary rights cannot be obtained by Sir tenants if the Sir holder is a minor, a female or lunatic or his Sir is managed by a Court of Wards which let the land. The devolution of Sir will take place according to Islamic law for Muslims and personal law for Hindus and if the heirs do not succeed to the proprietary rights in Sir they will hold their share as hereditary tenants.

3. *Devolution and Transfer and Sub-letting of Tenancies:—*

A permanent tenure holder and a fixed rate tenant have heritable and transferable interest but of others it is heritable but not generally transferable. The tenancy of a special expropriatory, occupancy and hereditary tenant can be sold in decree of arrears of rent. Great changes have been made in succession to the tenancies of both male and female tenants. A sub-tenant or a Sir tenant cannot sub-let his holding in part or full; all others can sub-let under certain restrictions. Non-occupancy tenants can sub-let for one year and again after another period of one year. Occupancy tenants in Agra expropriatory or hereditary tenants in both Agra and Oudh can sub-let their holdings for five years and can sub-let again after three years. These restrictions are not applicable to females, minors, lunatics, idiots, physically infirm or blind tenants. All other kinds of tenants can sub-let their holdings without restriction voluntary exchanges of land between tenants of the same landlord or landlords with written consent, and between landlord and tenant and between landlord and landlords are provided; and for consolidation of holdings, building houses, or improving the amenities thereof a compulsory exchange can be effected through sub-divisional officers. Landlords can also acquire land from

tenants' holding upto 5 acres for house, garden or grove on payment of compensation and any area for building purposes if the tenants' holdings are within the limits of municipalities, cantonments or notified areas.

4. *Rights to effect improvements*:—Every tenant is to receive a written and registered lease for a period exceeding one year or running from year to year from the landlord. Any tenant other than a sub-tenant can construct on his holding a residential house or cattle-shed or store-house or any other building for agricultural purpose without the permission of the land lord; but then, the tenant cannot get compensation for such improvement on ejection. He can sell it to some one else with the consent of the land-lord or he may remove it. A permanent tenure holder, a fixed rate tenant and an occupancy or special tenant in Oudh can make any building or construct wells, tanks etc. and water channels or works for drainage, reclaim, clear, enclose, level or terrace the land, and repair and renew them. An occupancy tenant in Agra and an ex-proprietary and a hereditary tenant may make any improvement except construction of tanks or other water storage works and of building in the immediate vicinity of the holding unless there is a local custom entitling him to do so or he has obtained the written consent of the land holder. If the land-lord does not permit then in certain cases an order can be obtained from the court. No non-occupancy tenant can make any improvement without the written consent of his land-holder. Any tenant making such improvement will pay the full rent of the holding. A land-holder can also make improvement with the written consent of a tenant in his holding except that of a permanent holder, fixed rate tenant, occupancy or special tenant in Oudh. Any tenant who makes an improvement in the holding with the consent of the land-lord or to which he is entitled and is ejected later on for any reason he shall be paid compensation. A tenant other than a non-occupancy tenant can plant trees in his holdings provided he does not thereby diminish the value of land outside his

holding. All scattered trees in the holdings of tenants, except tenants of *Sir* and sub-tenants, existing at the commencement of the Act shall be vased in the tenant provided he has held continuously such land from the beginning of 1335 *Fasli* (Since 1st. July, 1927). All disputes over the ownership of trees shall be decided by the sub-divisional officer.

5. *Abolition of illegal exactions and cesses* :—Taking of a premium or *Nazrana*, *abwab*, *Hari*, *Bayai* etc. and *corvee* or *Begar* are both prohibited; and cesses, which are not of the nature of rent and even if recorded in the Revenue Act 1901, cannot be recoverable in any civil or revenue court after a date notified by the Government, unless it is a bazar or fair cess sanctioned by the Government. If any person infringes these provisions or knowingly collects in cash or kind in excess of the amount due as an arrear of rent or sayar, or charges interest on arrears of rent at a rate higher than $6\frac{1}{2}\%$ or collects any rent which has been remitted or collects before the expiry of the period of suspension any rent suspended etc. the tenant, or lessee or licensee of sayar shall be entitled to recover compensation from him upto Rs. 200/- in addition to any amount or value of produce so collected, charged or credited. The penalty for collecting rent remitted or suspended is the immediate payment of the remitted or suspended amount of revenue or rent.

6. *Ejectments*:—No tenant shall be ejected from his dwelling house in a village merely on the ground that he has been ejected from his holding. The law of ejectment has been tightened and no tenant, who is not a habitual defaulter, will be ejected for arrears of rent. A tenant can be ejected only from the area illegally sub-let. If a tenant is ejected from the whole or any part of his holding for arrears of rent, all arrears of rent due in respect of that holding are wiped out. Ejectment for arrears of rent is allowed in case of expropriatory, occupancy or hereditary tenants only when the arrear does not exceed one year's rent. The tenant gets two years time for payment. An

application for the ejectment for decreed arrears must be filed between 1st June and 31st August and the tenant will be allowed upto the 31st May next following the expiry of one year from the date of the order on application to pay arrears, or if he consents, the arrears upto 31st May next following the expiry of one year from the date of a decree being given against him. If he fails to do it, he will be liable to immediate ejectment. Until he pays the arrears, or is ejected, he must pay the rent of each agricultural year by 31st May of that year. If he does not do so, he will be immediately ejected. Provision is also made for compensation for improvements and, if the compensation is greater than the rent in arrears, and the cost of the suits, the landholder cannot eject the tenant until he pays this excess. If within 30 days of the order of ejectment the tenant pays the rent, the ejectment order shall be void. The rent of a holding can be realised by an application for a notice of ejectment or by a suit, and the decree in the arrears of rent suit can be executed, like an ordinary money decree, by the attachment and sale of the property of the judgment-debtor, but not by the arrest of his person. If the decree is not satisfied for one year and no sale of the holding has taken place in case of ex-proprietory, occupancy or hereditary tenants, the tenant can be ejected from a portion of his holding whose rent does not exceed $1/6$ of the amount of the decree. The court may also lease the holding of a tenant for a maximum period of 6 years to any person who pays the decretal amount after which the holding will go back to him. The lessee shall be a non-occupancy tenant. Distraint of crops has been prohibited. Thus, the land lord has been given "effective and expeditious remedies" for realising his rent without the power to harass the tenant.

7. *Modifications in determination and payment of Rents:—*

For all rent payments the landholder must issue receipts on a printed form supplied by the Government in sets of 100 in the tehsils for 2 as. The landholder must prepare and retain the counterfoil of each receipt granted. A failure to issue receipt

makes him liable to a penalty not exceeding twice the amount paid, and a habitual defaulter is liable in the first offence to a fine of Rs. 100; in a second and subsequent offence to 3 month's imprisonment or to a fine of Rs. 500 or to both. Moreover, in rent suits a failure to produce counter-foils in the court will entitle it to form a reasonable presumption against the landholder.

The basis and method of assessment have been definitely laid down. In determining the rent rates for hereditary tenants, the rent rate officer will not only consider the actual rents paid, the quality of the land and its produce and the price of agricultural produce between 1309 and 1313 Fasli, but will also compare the valuation at his rates with the value of the produce to ensure that the valuation does not exceed $1/5$ of the produce and will consider the prices of articles which enter into the cost of production of the cultivator (i. e. his house hold expenses and cost of cultivation). In case of a sudden rise in prices due to an extraordinary cause or emergency a special officer will alter the rent in proportion to the increase or decrease in the assets of a mohal. In case of an emergency rents may be abated summarily and in case of an agricultural calamity, suspension or remission of rent will be allowed as below:—

- (a) If the loss is upto 8 as. but less than 10 as. in the rupee, a relief of 6 as. in the rupee will be granted.
- (b) If the loss is 10 as. but less than 12 as. a relief of 10 as. will be granted.
- (c) If the loss is 12 as. but less than 14 as. then a relief of Re. 1 will be granted.

But in Bundelkhand, and the districts of Allahabad, Etawah, Agra and Muttra on the other side of the Jamuna and, if necessary in other parts also, a remission or suspension of 4 as. in the rupee on the loss of 6 as. will be granted. If relief in revenue is granted then a relief in *malikana* will also be made.

An enhancement of rent can be made only on account of improvement made by the land holder and no enhancement is allowed if the improvement is made by state action. No enhancement or abatement is allowed on the ground of a rise or fall in agricultural produce. Abatement will be allowed only if the rent exceeds substantially the valuation of the holding and an enhancement will be allowed only when the rent is substantially below the valuation at appropriate rent rates. On an application from the tenant or the landholder to the court, the rent in kind under Batai or Kut can be commuted into cash. Rent can be paid direct to the landholder, by M. O. or in the court of the Tehsildar and for every payment there must be a receipt issued under the signature of the landholder or his agent. On the payment of a fee of four annas the tenant can demand a statement on account of rent and sayar within 3 months after the end of an agricultural year. The tenant can hold land for 10 years at the same rent and the rent will be revised every 20 years by settlement officer.

In Oudh the rent of occupancy tenants will be 2 as. less in the rupee than the rate of hereditary tenants and of special and exproprietary tenants it will be 2 as. less in the rupee than occupancy tenants. Any payment made by a tenant will not be applied to the discharge of an arrear barred by law of limitation.

CHAPTER XVII

DEVELOPMENT OF ORGANISED INDUSTRIES

Introductory :—For centuries the rural arts and crafts to supply the simple needs of the village and urban handicrafts, producing a host of articles of luxuries for the courts, for the rich classes, and for export had been flourishing in the country. We have seen in an earlier chapter how cotton weaving, silk manufactures, embroidery, woollen shawls and carpets etc., metal working, stone carving, enamelled jewellery, ivory carving and lacquer work, manufactures of arms and shields—all these were, organised in royal workshops or *karkhanas* and in the artisan's homes under craft guilds. They were patronised by our kings and courts, were very much coveted by foreigners and enjoyed a world-wide celebrity. In fact, "at a time when the West of Europe, the birth place of the modern industrial system, was inhabited by uncivilised tribes, India was famous for the wealth of her rulers and for the high artistic skill of her craftsmen. And, even at a much later period, when merchant adventurers from the west made their first appearance in India the industrial development of the country was, at any rate, not inferior to that of the more advanced European nations."¹ "The skill of the Indians in the production of delicate woven fabrics, in the mixing of colours, the working of metals and precious stones and in all manners of technical arts has from very early times enjoyed a world-wide celebrity."² "The art of smelting iron, of welding it and of making steel were very well known."³ The manufacture of steel and wrought iron had reached a high perfection and the famous Damascus blades were exported even

1 *Industrial Commission.*

2 *Prof. Weber.*

3 *Prof. Wilson.*

to England.⁴ Bernier and Tavernier have paid glowing tributes to the many artistic and luxury industries during the reign of Shahjehan.

Karkhanas or Workshops:—The manufactures of the luxuries and other articles for the Courts and the nobles were carried on in royal workshops under supervision. "Large halls are seen in many places called *Koshkhanas* or workshops for the artisans. In one hall embroiderers are busily employed, superintended by a master. In another you see the goldsmiths, in a third painters, in a fourth varnishers in lacquer work, in a fifth joiners, turners, tailors, and shoemakers, in a sixth manufacturers of silk brocade and fine muslin."⁵ This organisation of handicrafts in the workshops insured the excellence of designs and craftsmanship and encouraged improvements, provided a steady employment to the workers and relieved them of the risks of trade and the supply of foreign demand. Supply of raw materials, tools and capital did not cause any worry to them. But the work had to be done under strict supervision, guard and control of officials of the realm and watchmen; heavy penalties, both pecuniary and corporal, were imposed on recalcitrants and 25% of the pay of the weavers was taken by the men in charge.⁶ No cloth worth more than 72 livres was allowed to be sold independently by a weaver in royal workshop, the best workmen were compelled to work for the king; they were not well paid and compulsion and captivity cramped initiative and skill. The market was restricted within the country to the rich minority and therefore a large quantity of the manufactures which could stand long distance transport charges was exported. The heavy exactions and extortions of the liveries and officials discouraged production. The workers were "at the mercy of an administration conducted by men who were accustomed to

⁴ *Ranade*.

⁵ *Bernier* quoted by *Moreland* in *Akbar to Aurangzeb*.

⁶ *Hamilton : Trade Relations between England and India*.

extremes of luxury and display, who were discouraged by the conditions of their tenure from taking measures to foster the development of their charge, and who were impelled by the strongest motives to grasp for themselves the largest possible share of each producer's income. Productive enterprise was penalized, while the demands on the existing stream of commodities were certain to increase, the incentive to effort was bound to diminish, and the superior attractions of an unproductive life to become more and more apparent to all the most active elements of the population."⁷ "The foreign merchants provided a certain antidote to the dry rot which sterilized the energies of industrial producers under such a system. The activities of the foreigner stimulated production through the increased demand for commodities, the introduction of new staples, and improved processes."⁸

It was these products of the arts and crafts industries—"fine linens and calicoes, jewels, and embroideries, woolen and silk manufactures"—which together with precious stones and spices appealed very strongly to Europeans after their first main contact with the East in the Crusades, and formed the lucrative trade of the E. I. Co. The desire to trade in these commodities set all the nations of Europe to searching out a new route to India when the way through the eastern end of the Mediterranean was finally closed. These specialties led the traders of Europe to India which attracted the jealous eyes of the occident for its fabulous riches and brought successively the Portuguese, the Dutch, the French and the English.

Decline of Handicrafts :—With the advent of the British rule and centralized administration these luxury industries were deprived of the patronage of the kings and courts, lost their pristine glory, fell into decadence and gradually dwindled into insignificance. The E. I. Co.,

7. Macleod: *After the Crusades*.

8. *Macleod: After the Crusades*.

in the beginning out of her own self interest favoured these industries but later on the opposition of vested interests from England, compelled it to discourage the manufacture of cotton and silk goods especially and succeeded in getting prohibitory import duties imposed on them in England. The use of Indian manufactured goods in England was prohibited by Parliament and a policy of free trade was inflicted on India. Then the Industrial Revolution in England completed the rout of handicraft industries both in the domestic and foreign markets. The prevalence of English notions and ideas and the adoption of English dress etc. by the educated middle class did not provide succour to the struggling industries. The Industrial Revolution, the free trade policy and the arm of political injustice strangled and crippled them. Thus, towards the end of the 18th century they began to decline and by the middle of the 19th century most of them were in a moribund condition and stagnating. Their decay made the economic development of the country lop-sided and unbalanced, caused an industrial depression, spelt unemployment, aggravated the intensity and severity of the famines, and led to a rapid ruralisation of the country and increased pressure on the land.

"The industrial situation at the beginning of the 19th century was one of stagnation counteracted by a certain foreign demand. The caste system, however, provided for the continuance of hereditary industrial occupations since change was so difficult. It provided the mechanism for technical training dexterity, and the traditional manufacture of definite types of goods, and in the sons of the craftsmen there was a continuous succession of hereditary apprentices".⁹

Pre-War Industrial Development

With the downfall of the handicrafts industries, capitalistic enterprise began to be introduced in the country first in the form of plantation industry¹⁰ during the regime of the E.I. Co. and

9. Knowles : *op. cit* p. 440

10. See Ante chapter IV.

later on in the form of factory industry. Before the fifties of the last century, excluding indigo factories, there was an almost entire lack of factory industry in India.¹¹ During the fifties cotton and jute industry on the factory system began to be organised and later on coal-mining. Besides these three important industries, which alone had grown by 1880, the attempts at the establishment of other factory industries were erratic and met with qualified success. In 1860 with a view to provide leather materials to the army the Government established a Harness and Saddlery factory at Cawnpore and in 1880 a private concern with Government aid was also started. Efforts were made to plant a glass factory in U. P. and an iron industry in Madras Presidency. The tanning industry in Madras grew during the forties and built up an export trade in hides and skins to U K, Germany etc. by 1880.¹² While by 1800, the Industrial Revolution had firmly planted the factory system in England, it could be transplanted in India successfully only after 1850. Before the era of the railways and steamships which made it possible to import plants and machineries from England to India and to develop the factory industries, the commercial instinct of the E. I. Co. had led it to apply steam to shipping, although the steam ships could be used in voyages between India and England only after 1825 when the problem of coaling stations had been solved. A number of steamers however, plied on the rivers round about Calcutta and ocean sailing ships between Calcutta and the sea. In 1832 the Company owned 7 steam vessels in India and 4 were owned by private companies. Steam engines were also utilised in docks, canal-boring, coal mining, flour grinding, money coining, silk-reeling and in cotton manufacture and a Paper mill in the vicinity of Calcutta under European enterprise.¹³ Most of these enterprises, however,

11. Gadgil : *Industrial Evolution of India* p. 53.

12. Gadgil : *op. cit.* p. 58-59.

13. Buchanan : *Development of Capitalistic Enterprise in India.*

proved abortive, and it was only after the powerful reactions of the demands of the Industrial Revolution that an era of public works was inaugurated and the railways and macadamised roads began to unlock the country. Instead of an industrial revolution India experienced a commercial revolution and built up an extensive inland and foreign trade. In the beginning of the second half of the last century the railways were developed from Bombay, Calcutta and Madras and it was only after this that coal mines began to be operated actively and cotton and jute mills were developed. The development of the railways and steamships not only meant the rapid and cheap importation of plants and machineries and their spare parts but also of manufactured goods and of mechanics and engineers to instal, work and repair the machines. The railways also stimulated the development of engineering by opening repair shops in which Indians got training and engineering also developed in Bombay, Calcutta and Assam for the repair of cotton, jute and tea machinery. With the exception of the cotton mill industry, all others owed their growth to British enterprise and capital. One would expect that with the establishment of law and order the development of industries ought to have been rapid. But the deadening effects of a century and half of wars, plunder and rapine, the adoption of a policy of free trade in the interest of the demands of the Industrial Revolution, the emergence of the doctrine of economic imperialism and lack of capital did not call forth enterprise. And the development of the two textiles, jute and cotton, was due to the Crimean War and the American Civil War respectively. Thus, by 1860 while the indigenous industries were rapidly declining on account of several adverse influences, the development of factory industry was too meagre and disproportionate to absorb the displaced craftsmen.

Comparatively superior to the English industries upto the middle of the 18th century, Indian industries became relatively inferior to them by the middle of the 19th. Attention

was drawn to this backward state of our industries by many eminent Indian patriots and thinkers and by the Famine Commissions of 1880 and 1901 which emphasised very strongly the diversification of industries to fight the scourges of famine and poverty among the masses. The Indian National Congress since its inception in 1885 began to agitate for a forward industrial policy on the part of the Government. The phenomenal success of the Japanese in rapidly industrialising their country in a short period with state aid further stimulated the demand for the industrialisation of the country. The imposition of the cotton excise of 3½% in 1894 at the instance of Lancashire confirmed the view held widely that the Government was opposed to the industrial development of the country which would deprive the British manufacturers and capitalists of the extensive Indian market. The growing poverty of the masses, the recurrence of famines and their increased severity and intensity, the absence of suitable opportunities for industrial employments for the educated young men and the growing 'drain' of wealth from the country turned the economic discontent into a political one and led to the starting of the Indian Industrial Conference as an off-shoot of the Congress in 1905. The partition of Bengal initiating the Swadeshi movement with a positive and negative programme of development of indigenous industries and the boycott of foreign goods especially English, caused a mushroom growth of Indian enterprises for manufacture of piece-goods, soap, matches, pencils, cutlery, glass and hosiery etc. Many banks were also started. But this feverish enthusiasm was short-lived, and many of these industries, on account of lack of business ability, training and experience, of inadequate finance, ill consideration of economic factors and the stunted indifference and even positive apathy of the Government were unsuccessful. Their failure damped the patriotic enthusiasm and the boycott movement enraged the Government which allowed unlettered foreign competition to ruin the indigenous industries. The policy of differential railway rates also operated against them. The failure of the Swadeshi

movement, however, led to an insistent demand for state aid to industrial development by starting pioneer factories, supplying technical advice, helping with capital, instituting commercial and technical education and protecting the indigenous enterprises against foreign competition.

In the meantime between 1830-95 and 1895-1914 the textiles and coal-mining had made some progress. In fact during the first period the cotton and jute mills expanded rapidly : cotton mills increased from 58 to 144 and jute mills from 22 to 29, due to growing exports of twist & yarn and of jute manufactures. With the extension of railways coal-mining also registered an increase from over 1.29 m. tons in 1885 to over 2.8 m. tons in 1894, but in value it still lagged behind the output of Kolar gold mines.¹⁴ Besides these 6 woollen mills and 8 paper mills by 1895 had also sprung up and a number of cotton and jute pressing and ginning factories, rice and timber mills, lac factories, engineering workshops and foundries, and tanneries had come into existence. Thus, by 1895 the cotton and jute factories and coal-mining had shewed a steady increase and many ancillary and seasonal smaller industries had been developed and this development encouraged Justice Ranade to hope that India would "work out its industrial salvation." This rapid extension of factory industry was due to the removal of the 5% duty on machinery, mill stores and steel goods and to the development of railways and the consequent commercial revolution; but the removal of 5% duty from cotton imports deprived the cotton industry of this small protection. Its development was due to changes in internal demand, while that of jute was due to the increased demand for food stuffs and raw materials by the industrialised countries of the world and the consequent opening of the grain lands of America and Australia. In the second period inspite of a temporary setback due to many causes, internal and external the cotton factories increased from 144 in 1895

to 264 in 1914; the jute mills increased from 29 to 64, and the output of coal mines increased from over 6 m. tons in 1901 to over 15'73 m. tons in 1914 on account of the extension of railways and factories and of improved technique of production. Moreover, the period witnessed the growth of mineral and metallurgical industries like petroleum and manganese etc. Since 1887 petroleum industry grew up on modern lines and between 1893 and 1914 the output increased from over 15 m. gallons to over 259'34 m. gallons. Although the production of manganese had begun in 1892 in Madras, the manganese industry developed only after the operation of the rich deposits of Central Provinces in 1900. The Russo-Japanese War, cutting off the large supplies from Russia and the demands of the iron and steel industry of Europe and America stimulated the industry and it reached its peak in 1907 with an output of 9 lac tons. Between 1908-11 India produced the largest quantity of manganese mostly for export. Gold mining from Kolar fields was also developed. Salt and mica were also developed considerably but salt-petre of which India had a monopoly till 1860, declined. As regards iron and steel industry, the development of which means "real industrial revolution," the Bengal Iron and Steel Co. began producing pig iron in 1875 but due to the poor quality of the ore it was not a financial success until better ores were found in 1909. In the meantime in 1907 the famous Tata Iron & Steel Co. was formed at Jamshedpur and began to operate in 1912 but till 1914 their production was very small. The development of mineral industries, on the whole, was thus remarkable but most inadequate for the needs of the country. There was no mining of metaliferous minerals on account of the difficulty of economical and profitable uses of the bye-products and the lack of suitable chemical industries. Sugar and leather tanning industries suffered a set-back in this period mostly on account of increased imports and bounty-fed beet sugar and the discovery of the chrome tanning process in America. The seasonal industries

like gins and presses; rice and timber mills etc., flour and oil mills, engineering and railway workshops, foundries, quarries etc., were also developed considerably in this period. They registered a real industrial advance. "Thus, the growth (of large factory industry) from 1890 until the World War was fairly steady in all fields. Cotton spindles more than doubled, cotton power looms quadrupled, jute looms increased $4\frac{1}{2}$ times and coal raisings 6 times, while the extension of railways continued at the rate of about 800 miles per annum." The number of employees in factories and mines increased ¹⁵ about five-fold. On the whole, however, the extent of organised factory industries upto the outbreak of the Great War in 1914 was too limited and small as compared to the needs, the size, the population and potentialities of the country and development had been very slow. Cotton, jute and coal mining, besides plantations, were the only organised industries established on a sound footing. According to the industrial census of 1911 out of 7,113 factories (establishments employing more than 20 persons on an average) only 4,569 or less than $2\frac{1}{3}$ utilised mechanical power and more than 81 per cent of the industrial population was employed by plantations, textiles, mines and transport industries.¹⁶

The World War and its effects:—The war exposed the extreme weakness of India's industrial position and her undue dependence on foreign supplies for iron and steel goods, machineries, steam engines, and boilers, railway rolling stock and materials, and chemicals of various kinds. All these essential supplies were abruptly cut off by the war. The preoccupation of the Allies with the war and the shutting out of the countries which were substantial importers of Indian primary products like Germany and Austria and the shortage of shipping and railway wagons occasioned by the exigencies of the war for transport of troops and

15. Buchanan *op. cit.* p. 139-40.

16. Gadgil : *op. cit.* p. 119.

munitions dislocated the industrial and commercial advance of the country temporarily. Markets for rice and hides were dislocated; the aluminium industry of Madras received a set-back on account of the stoppage of aluminium imports from abroad; the railways suffered in equipment and factory industries in general could not expand for want of machineries and essential materials. The shortage of tonnage and wagons was felt more acutely by agricultural products than manufactures or minerals, the position of which was strengthened by their brisk demand during the war. Only export industries were adversely affected, and cotton, coal, manganese etc., suffered a temporary set-back at the outbreak of the war. On the other hand, it made the British Government to realise its follies in adopting an attitude of apathy and indifference towards India's industrial advance. The military importance of the development of Indian industries was emphasized by the brilliant part played by them in essential supplies to the eastern theatre of the war, which would have been considerably greater if they had been organised and developed on modern lines with Government assistance in many ways. The modern munitions of war cover such a long range of commodities produced by an industrially advanced country that the development of the rich and extensive natural resources of India is a matter of almost military necessity.¹⁷ The war therefore, by creating an enormous demand and high prices for raw materials and food-stuffs which India could supply to the Allies re-acted very favourably on her export trade and the balance of trade in India's favour increased from an average of £ 53 m. to £ 60 m. average. The lack of usual imports from Europe provided an excellent opportunity to the Indian enterprisers and capitalists to launch new enterprises like cotton, iron and steel, wool, mining and metallurgical and leather factories etc. The insistent demand of the war zones for iron and steel, woollen and leather goods stimulated their production while to meet the internal demand the Cotton

17. *Mont-Ford Report.*

industry expanded very much. The jute industry also advanced rapidly to meet the increased demand for gunny cloth and sacks. But unfortunately, thanks to the policy of the Government, India was not in a position to take the fullest advantage of the extremely favourable situation for the advance of her industries and the result was that in place of the British and German, the neutral American and Japanese industries captured and glutted the Indian market and succeeded in building up an extensive export trade to India during the war and the post-war period. The limiting factor in India was not only lack of machinery and essential materials, but also, of expert technicians and chemists, shortage of skilled labourers, of coal and coking plant, and of transport accommodation on railways and ships and of an organised financial and capital market and adequate banking and credit facilities.

With a view to investigate the possibilities of profitable employment of Indian capital in industry and commerce and to suggest the ways and means in which the Government could help the development of industries, the Industrial Commission under Sir Thomas Holland was appointed in 1916. In order to remove the deficiency in the matter of industrial development and to make India self-sufficient for essential supplies, the Commission recommended direct and active help by the Government to industries by organisation of technical and scientific services for industrial and chemical researches, by provision of technical and industrial education and commercial intelligence, by the creation of a Stores Purchase Department and the establishment of Provincial Departments of Industries with an Imperial Department for co-ordination. In 1917 the Indian Munitions Board was established which played an important part in pushing the production of such materials as were required by the Allies for the successful prosecution of the War. The main purpose of the Board was the control and development of such Indian materials and industries as supplied the war with its sinews, the limitation and co-ordination of the demands for

imported manufactures and products and the application of manufacturing processes for war purposes to reduce the demands on shipping. But in many ways it fostered the growth of several indigenous industries by purchasing a large quantity of indigenous products and materials, by distributing quotas of all orders from Allies under Home indents and priority certificates to Indian manufacturers, by helping individuals and firms in importing plant, experts or skilled labour from abroad and by supplying of necessary technical information and advice to new enterprisers establishing new industries.¹⁸ As a consequence of this policy cotton, jute, iron and steel, leather, woollen, engineering, chemical, mining, paper, glass, cement, cutlery, paints and varnishes, surgical instruments, oils and fertilizers were given a great impetus.

During the war period there was a general rise in prices which began at the outset of the conflagration and continued till 1921. During this period upto 1917, agriculture felt prosperity although the Government control of prices of food-stuffs and raw materials did not allow them to rise except in case of raw cotton, as fast as they would have been. But the prices of certain imports like kerosene, cloth, sugar, metals, and salt rose very high. The internal prices and exports of food-grains to the Allies were rigidly regulated by the Government and therefore exports of food-stuffs were very low during the war. After the Armistice in 1918 the exports of food-grains were allowed only to Ceylone, and Straits Settlements and a scheme for a proportionate distribution of provincial surpluses was also brought into force. The severe famine of 1918-19 and that of 1920-21 led to imports of wheat from Australia and rice from Burma in very large quantities and the abnormal rise in price of wheat caused the reimposition of embargo and imports of foreign wheat. The abnormality and disparity in rise of prices of export and import products resulted in lootings of the

¹⁸ Jathar and Beri. op. cit. p. 473.

markets in many parts. Heavy fall in exports of oil seeds except linseed which was bought more by U.K., than by foreigners, was registered. Increased freights and contraction of demand from the continental countries, both allies and enemies, were the chief causes. The reduction in exports and less consumption by the local mills depressed jute prices.

With the general rise in prices the profits of industry increased rapidly and stimulated their further development. The stringent Government control over all economic activities during the war affected different industries in different ways. Large purchases of Government at fixed prices encouraged and spelt the prosperity of jute, mica, manganese, tea, woollen and iron and steel industries whereas in case of coal not only the supply and distribution of coal to various industries through the Coal Transportation Officer was strictly regulated but exports were also embargoed or prohibited. The industries were not only stimulated by high prices of their products but also by the relatively lesser rise in prices of raw materials and wages. The difficulties of getting materials and other things improved the position of the existing producers. "The war meant to the agricultural producer chiefly a loss of old export markets. To the manufacturer it meant, as in cotton and coal, a cessation of foreign competition or, as in jute, manganese and other minerals useful for munitions purposes, the creation of a special demand."¹⁹ On the whole, however, the war created a very favourable environment for the progress of organised industries in the country.

The exchange and currency difficulties of the Government during the later part of the war since 1916 had very important repercussions on the industries and trade of the country. The phenomenal rise in the price of silver, a contingency which had never been considered in framing the Indian Currency Policy,

caused a sympathetic rise in the rupee-sterling exchange since August 1917 from 1s. 4d. to 2s. 4d in April 1920.

This abnormal rise in the rate of exchange put a premium on imports and discouraged exports in general, but the immediate effect of decontrolling exchange was not very adverse to the foreign trade of the country, because the enormous expansion of currency, brisk trade and the famine of 1918-19 caused a heavy increase in prices and after the armistice there was very keen demand for the primary products of India from outside. The immediate post-war price boom encouraged the exports of hides and skins, jute, oil-seeds, lac, dyeing and tanning materials and yarn—raw materials which constituted the bulk of export trade of the country; while an impoverished Europe, after a long and protracted exacting war, could not maintain the imports of manufactures in India which formed the bulk of its imports. The impossibility of prompt deliveries of imports turned the balance of trade in favour of India (1918-20).

Post-War Boom:—By the close of the war, the dye was cast for an unprecedented boom. The expected keen demand for all kinds of products, rapidly rising prices after 1918, abnormal inflation of currencies, phenomenal profits of industry and their continuation, gave a strong tone of optimism to manufacturers and businessmen who planned extensions and expansions of their business and production on a large scale. The rapidly rising rate of exchange induced them to place heavy orders for the purchase of machinery and other essentials and to float a large number of companies. The acceptance of the 2s gold ratio, as recommended by the Babington Smith Committee, by the Government of India, induced the importers to hope that high exchanges would continue. The result was an unusual industrial prosperity which was short-lived. Cotton, jute, iron and steel, manganese, lac, cement, oil-seeds and hides and skins etc., felt great prosperity. The mania of getting rich quickly caught the business and industrial world, and very high dividends on shares and stocks caused the prices of industrial securities to rise abnormally.

In spite of the banking crisis which began in 1913 the number of joint stock companies in British India increased from 2,681 in 1913-14 with a paid-up capital of about 76 crores to 2,713 in 1918-19 with a paid-up capital of about 106 crores and to 4,781 in 1921-22 with a paid-up capital of about 223 crores. But it is more striking to note that 935 companies with an authorised capital of about 275 crores in 1919-20 and 965 companies with an authorised capital of 146 crores in 1920-21 were newly registered in India.²⁰ Thus, between 1919 and 1921 the number of companies increased by 75% and the paid up capital more than doubled, and although during the war the difficulties of importing machinery and plant, mill stores and technical experts prevented the rapid mounting up of the number of companies; the paid up capital of the existing companies increased considerably. The dividends paid out of windfall profits were phenomenal: The Bombay Cotton Mills e. g. paid 23.7% in 1918; 40.1% in 1919; 35.2% in 1920 and 30.1% in 1921.²¹ Many of these companies were recklessly and fraudulently floated but owing to the optimism in the air, their capital issues were subscribed. There was a good deal of speculation in the stock and share markets and the values of industrial securities particularly of cotton, jute, iron and steel, cement and manganese companies, rose very high. The tempo of speculation is evidenced by the fact that "the shares of the Tata Bank were at Rs. 90 premium when only Rs. 15 were paid up and no reserve fund at all. The Tata Oil Mills share of the face value of Rs. 100 was quoted at Rs. 575 premium, even before the erection of the machinery for the working of the mill. Owing to this popular hysteria and frenzy to make big fortunes in a week or fortnight numerous new companies, for every conceivable object rose like mushrooms." Wages and costs also increased rapidly and currency and exchange conditions intensified the boom.

20. Gadgil : *op. cit.* p. 233.

21. Textile Tariff Board quoted by Jathar and Beri *op. cit.* p. 474.

The Depression and Recession

The bubble of the boom, which reached its peak in April, 1920, was pricked at last and there followed a long period of acute depression which was lengthened and accentuated by the currency policy of the Government entailing violent oscillations in exchange rate. When with the expansion of currency and rise in prices the exchange began to rise since August 1917, then in expectation of a quick recovery of demand from all countries after the war and a continuation of war time profits, the importers placed heavy orders to take advantage of the exchange. This tendency grew stronger after the armistice till April 1920 when the exchange was at 2s. 4d. since December, 1919. But the heavy orders for goods and machineries etc. placed during the war and at its close could not be executed promptly. The impoverishment of Europe and its inability to purchase goods, the high exchange during 1919, and the unfavourable agricultural conditions reduced exports to a low level. Then from April 1920 the exchange began to tumble down and by May 1921, it reached the lowest figure of 1s. 3d. It was at this very time that the orders for machineries etc. placed before began to be executed and to arrive in India. Hardwares, machinery and mill work, metals, motor cars and cycles, railway plant and rolling stock, instruments and apparatuses were imported in huge quantities in 1920-21-22. The arrival of these goods when the exchange had begun its downward trend and become unfavourable created acute difficulties to the importers, many of whom became bankrupt. The imports of machinery and mill stores for extensions of old and establishment of new industries increased their productive capacity when the falling off of the demand and depression had begun. The depression was therefore intensified. Many importers in Bombay, Delhi, Amritsar etc. decided to settle the contracts only at 2s. rate and thus repudiated them. The depression continued and on account of the currency policy India did not share in the world recovery from 1924 onwards. The rise in the exchange rate after 1924

kopt prices down in India and hit hard the poor agriculturist and many industries. This prolonged the period of the depression still further and intensified foreign competition at a time when the world currencies had been depreciated. "The pegging of the exchange by Government at a parity even higher than pre-war may be taken as one of the contributing factors to a prolonged period of general post-war depression".²² All industries and the Tariff Board have complained against this handicap of Indian industries and the Board in making its recommendations for protection had always made allowance for this fact. This unstable exchange throughout the post-war period has adversely affected the foreign trade of the country also. With its stabilisation there was a recovery in 1927 onwards but since 1929 the world economic blizzard has had its undesirable effect on Indian industries and trade as well. As this depression brought about a fall of more than 50% in the prices of primary products, it hit hardest the cultivators of the country whose reduced purchasing power had a very undesirable effect on the indigenous industries. Our country being mainly agricultural, the world slump in prices intensified the trade depression here and the agricultural depression abroad reduced the demand for Indian jute manufactures. The depreciation of currencies in foreign countries and the appreciation of the rupee increased the severity of foreign competition in India and depressed still further her industries. The Government finances were also adversely affected and retrenchment, salary cuts and increased taxation had to be resorted to to balance the budget. The stocks and money markets became very unstable and the rates of interest and dividend fell very low. Since 1932, however, there was a gradual recovery which reached its peak in 1937. Sugar, Cotton, iron and steel, cement, paper, jute and other industries except coal showed great increases. This has been due partly to the grant of protection to certain industries, partly to the importation of machinery and mill stores at favourable exchanges, partly to the sale and export of

22 : *Gadgil : op. cit. p. 235.*

huge quantities of gold making available large sums for company flotations and partly to the Swadeshi movement encouraged by the Congress. Since 1937-38, however, there was a recession. The recovery in prices of primary products and increased world trade in them increased the purchasing power of the cultivators in 1937 and this reacted very favourably on all Indian industries. There was again a boom, increased trade, industry and speculation followed by the recession, since October 1937. The prices began to fall again and the share and commodity markets suffered very heavily, profits and dividends declined and industries were depressed.

Present War:—The present war, however, has again caused a feverish activity in production and sale. There is increased employment, rise in prices, heavy profits, company flotations and extensions, large government orders and all industries and trades have considerably toned up. The War Supply Departments and the Industrial and Scientific Research Committee, the Export Advisory Council etc. are doing their level best to encourage the industries, although the shutting out of Europe to the Indian exports of raw materials and foodstuffs has deprived the export trade of a very valuable market. During 8 months of the war ending November 1940 (in which there was no export to Europe) the export to European countries declined from 13.52 lakhs in 1939-40 to 6.08 lakhs and the exports to Japan and Egypt in the same period fell by 2.65 and 300 lakhs respectively. On the whole, however, export trade increased by 870 lakhs on account of greater intakes of American countries. Raw Cotton, Wool and Jute, Sugar, Rice, Coffee, Hides and Skins and Groundnuts received a set-back. But the exports of cotton piece goods, twist and yarn, jute, gunny bags and cloth and tanned hides and skins increased. The Price Control Boards all over the country do not allow the rise in prices to go very high. All the familiar phenomena of a boom are feasible. Fresh measures of taxation have been adopted and the Excess Profits Duty prevents distribution of

very large dividends. Besides various increases in postal rates, a surcharge of 25% on all taxes on income and a 10% excess on trunk telephone charges have been imposed in November 1940.

In fact the war has given a momentous stride to the development of industries in the country. The Government has recognised that the scope of industrialisation should have no limits and that the pace of industrialisation should be sufficiently accelerated at all costs. The Government should not only care for the immediate needs of the war but should launch a comprehensive plan of all-round industrial development to enable the country to take a big planned stride forward so that India may attain industrial self-sufficiency in spite of a co-ordinated imperial war effort. For a second time a titanic conflict has provided a unique opportunity to India to industrialise her economic structure and the stoppage of export of her raw materials has afforded a very good chance to develop scientific and industrial research to utilize them within the country. The stoppage of import of many commodities essential for our economic and industrial life like machinery and chemicals and even for our health like medicines and drugs etc. should be seized to manufacture them within the country. From this point of view the establishment of the Board of Scientific and Industrial Research has been welcomed on all hands but it is gratifying to note that the Board while concentrating on immediate war needs is taking a long term view to plan a programme for meeting the industrial requirements of the country. New industries like motor engines, air-crafts and ships etc. have been planned and it is expected that now that the deliberations of the Eastern Group Conference have been over and its head quarters established at Delhi, India would become the chief industrial centre of the East. As a result of the Chatfield Committee's Report to manufacture modern armaments a four crore scheme for expansion and modernisation of ordnance factories by over 20 p. c. has been adopted and the whole

resources of His Majesty's Government have been placed at the disposal of the Government of India for planning special factories. But most of this planning depends upon the demands of the British Government. Within 8 months of the out-break of the war the monthly output of these factories increased by 7 to 12 times their peace time production. The Army Clothing Factory at Shahjehanpur now produces 3 to 4 times its prewar planned output. The number of employees has increased from 800 to 10,000 and 14 miles of cloth is used daily in preparing uniforms. New Clothing Factories have been opened in Bombay Madras, Calcutta and the Punjab. In fact more than 90% of the war requirements of India (rifles, machine-guns, saddlery, blankets, clothes, artillery and propellents) are now manufactured within the country. She has besides accepted large orders for the supplies of these things to Singapore, Hongkong, Egypt, the Middle East and U. K. and other Empire Countries. From eleven countries of the Empire the Supply Department has recently received orders for 5,00,000 yards of khaki shirtings, fish plates and slippers for railways, coal, rolled steel joists, steel tanks and staging, tents, materials and fittings for military hospitals, etc. The U. K. has placed an order for boots worth Rs. 1 crore and now 125,000 pairs of boots per month are being supplied. Palestine and Egypt have placed an order for Rs. 40 lakhs for fabricated steel buildings and Egypt again for 2,300 electric fans. She has sent overseas 100 m. rounds of small arms ammunition and 4 lakhs of gun ammunition, 1000 m. sandbags, 1 m. pair of boots, 20,000 tents 1.25 lakhs hand-loom army blankets.²³ It is encouraging to learn that to push the manufacture of aircraft the Government of India have decided to place an order for 50 planes with the new company to be established in Mysore State and to pay in advance Rs. 2½ crores for their order. Half the capital of the

23 : Sir M. Hallet at the 20th Industries Conference on 16th December 1940.

company will be subscribed by the Mysore Government and the other half by Messrs. Walchand Hirachand and partners and representatives of an American firm, whose solicitors have signed the contract with the Government of India, will assist in the manufacture. For the ship-building yard to manufacture ships money has already been found but Mr. W. Hirachand's scheme for automobile manufacture costing about Rs. 2½ crores has not been accepted by the Government. The Government is also encouraging through research and technical advice the development of drugs, chemicals, lubricating oils, and glass manufactures through the Industrial Research Bureau and Council (now merged in the Board of S. and I. research) and through the Drugs Supply Committee etc. A Scheme for training 15,000 technicians during 1941 to man the expanding war industries has been adopted and facilities are being provided for training them in training institutions. The reports of the Metals Committee, Fuel Research Committee and the Cellulose Research Committee recently have been considered by the Board of S. Sc. and I. Research and approved. Metallurgical research has been centralised at Jamshedpur while fuel research is to be conducted in its various aspects at Jamshedpur, Dhanbad, Calcutta and Dacca. An Industrial Research Utilisation Committee of industrialists with the Commerce Member as the head has been set up to advise the Government as to the best means of utilising the result of researches of these committees as also of the Imperial Sericulture and Woollen Industry Committees. The Industries Conference at Lucknow and the Export Advisory Council at Calcutta have suggested the sending of trade delegations to Africa, Australia, S. America, East Indies and New Zealand for discovering new markets or expanding the old ones. It is essential that the new industries that are now growing as a result of the war and the Government encouragement should be protected against foreign competition when the war is over. It is gratifying to note that the Government have expressed their readiness to consider the question of protecting and assisting specified industries e. g. chemicals after the war

if they are developed on sound lines. Such a policy will enable them to continue their existence and encourage them to plan out their long term development. On the whole therefore, one result of the present war is the industrial development and establishment of new industries in India and we may expect that if the Government redeem their promise of protection after the war India would have made a rapid stride in the industrialisation of her economic structure at the close of the war. The increase in taxation, surcharges on incomes and excess profits duty etc. have been resented by the business community as also the dismantling of a few branch lines of railways. The Department of supply alone placed orders with Indian industries for goods worth Rs. 50 crores upto December 1940.

This brief survey of the development of capitalistic enterprise brings out clearly that the industrial development of the country has not been very great. Although India occupies the eighth position among the leading industrial countries of the world in ranking list of the League of Nations yet she is still overwhelmingly agricultural. 77% of the population according to 1931 census is engaged in Agriculture and pastoral industries and 89% live in the villages. The exports still consist mainly of raw materials and food-stuffs although since the world-war there has been an increasing tendency to export manufactured goods; the imports still consist mostly of manufactured goods. During three quarters of a century the factory system has taken a firm root in the land but this industrial progress has been only on a limited scale and in comparison with other countries it has been slow. In fact, the industrial development has not been commensurate with the size of the country, its population and its natural resources.²⁴ The industrial system is unevenly, and in most cases inadequately developed, and the capitalists of the country, with a few notable exceptions, have till now left to other nations the work and the profit of manufacturing her valuable raw materials, or have allowed them to remain unutilised, ²⁵

Causes of Industrial Deficiency and slow growth of Industries:—Among the causes responsible for this slow development and deficiency the Industrial Commission emphasized the following:—(a) Lack of organised iron and steel, engineering and chemical industries (b) Shyness of Capital for modern enterprises generally; (c) Lack of suitable technologists, engineering chemists, and foremen; (d) Absence of technical schools; (e) *Laissez Faire* policy of the Government. Government policy was marked with apathy, a very imperfect provision of technical and industrial education and the collection and dissemination of commercial and industrial information. Due to the absence of a proper system of industrial education and a considered policy of encouragement to industries, hereditary predisposition and the influence of surroundings, the Indian capitalists have generally followed their ancestral tradition of rural trade, and have confined themselves to finance of agriculture and of such industries as already existed. With improved communication and transport they only extended the scale of their operations. In trade and money lending, and to a less extent in financing village artisans, the trading classes found that large and certain gains were to be made, while modern industries required technical knowledge, and offered very doubtful and, in most cases, apparently smaller profits. The purely literary type of education among the intellectual classes militated against industrial development and emphasized the necessity for a system of education which would give a practical bias to the minds of Indian youths. Even the professional men and officials have preferred generally attractive investments in land and building to investments in industrial enterprises. Most of the new industry has been founded and built up by British capital and enterprise which still dominate in railways, banking, coal, jute, tea and foreign commerce. Grim poverty, chronic indebtedness, low scales of income, undeveloped resources, lack of suitable banking, credit and investment facilities and the hoarding habit—have all conspired to make capital available for

industries too inadequate. Since the Great War, however, there has been much improvement and "practically all the cotton mill shares, perhaps over half the jute mill shares, much of the coal shares, nearly all the iron and steel shares" are owned by Indians as also a large part of Government loans and Government sponsored enterprises. The flotation of a large number of joint stock companies, of Government rupee loans, of new enterprises like matches, cement, sugar etc., of co-operative credit societies and banks, the increased balances of Savings Bank deposits and Post Office Cash Certificates in recent years point to a great potential capital and shaking off of its shyness and timidity with increased banking and credit facilities. Still there is an urgent need and great scope for the development of more indigenous capital resources. The importation of foreign capital and enterprise not only takes out of the country all profits of industry and interest on capital but also it leads to a ruthless exploitation of the natural resources and of indigenous labour and has given rise to a very unfortunate political and economic controversy. A number of irritating political, economic and financial safeguards at the instance of the foreign capitalists and enterprisers have been inserted in the New Constitution as brakes on our political and economic emancipation. The deficiencies in the matter of chemicals for supplying essential materials to the indigenous industries like leather, dyes, oils, matches, paper, textiles etc., and in industrial financing still continue unabated. The managing agency system is very inelastic and full of drawbacks; the system of deposits from the public is very unsatisfactory and precarious, and the joint stock banks follow the orthodox principles of commercial banking. Moreover, they cannot with safety combine long term finances of industries with short term deposits. Absence of a suitable method of advice and assistance to the public for investments and failure of many smaller industries shaking public confidence is also a handicap in industrial financing especially to middle class small entrepreneurs. The Industrial Commission recom-

mended the establishment of industrial banks and the grant of loans and expert technical advice by the provincial Governments for small and cottage industries. Since the Reforms of 1919 Industries Departments have been making suitable grants under the State Aid to Industries Act in Madras, Bihar and Orissa, Bengal since 1923 and under the Industrial Loans Act since 1930 in the Punjab. The U. P. Government have also been making grants to various small and cottage industries. The aid given, however, has been very small and a part of it has been written off: and it suffers through the administration of the Departments. The Banking Committees recommended the establishment of Provincial Industrial Corporations for major industries with long term debenture issues guaranteed by Government and with Government subscription of the part of the shares. More funds should be obtained by fixed deposits. Such Corporations have recently been established in U. P. and Bengal. There should be an All-India Industrial Corporation for co-ordination, guidance and finance or a Central Association of these corporations should be formed. But the most crying need is the establishment of specialised industrial banks for long term finance. Mr. Manu Subedar has suggested the creation of an All-India Industrial Bank with branches in important industrial centres. The Government has also given up its *laissez faire* policy but it should follow a more vigorous and bolder industrial and fiscal policy and remove other hindrances to industrial development.

Need and Potentialities for Industrialisation:—That there is a crying need for rapid industrialisation in India needs no labouring. The dependence of more than 3/4 of the population on a precarious and seasonal industry like agriculture, the excessive pressure of population on the land, the extremely low standard of living and deadening poverty and indigence, the unemployment among the educated middle class youths and under-employment of cultivators—all point to the urgent need of a planned industrial economy to place the country on the

basis of a surplus economy. The Famine Commissions have emphasized the necessity of diversification of occupations by development of industries free from the traditional vagaries of the monsoons. And there are immense possibilities of developing them here. In spite of the cheap advice of many western writers that India would do well to concentrate her energies on the development of her agriculture and should not fritter them away in the development of industries; and in spite of their grave warning that such a course would divert capital from agriculture to industry and would be detrimental, there is no Indian worth his salt who will accept that India is destined by nature to be an agricultural country. Her vast and immensely rich natural resources in vegetable, animal and mineral products providing raw materials of industry, her satisfactory power resources in hydro-electricity, coal and oil; her abundant population providing cheap and tractable labour; improved facilities for transport by roads and rails providing an extensive and developing home market, her considerable foreign trade, her vast potential capital and the recent enthusiasm for industrial enterprises and other kinds of profitable investments, improved banking and credit facilities, a policy of discriminating protective tariffs, popular awakening due to the Congress and its recent ministries and the Congress Scheme of a national planned industrial development and the stimulus of the present war and Government encouragement and help—all these augur well for the future of industries in India. In a scheme of national planning agriculture, small and cottage industries and factory industries will find their own place without any clash of interests.

Advantages

Industrial development "would be very much to the advantage of the country as a whole, creating new sources of wealth, encouraging the accumulation of capital, enlarging the public revenues, providing more profitable employment for labour, reducing the excessive dependence of the country on the unstable profits of agriculture, and finally, stimulating the

national life and developing the national character." It will relieve the severity of famines, increase the national dividend and taxable capacity, make the system of taxation elastic, solve middle class unemployment and over-crowding in some professions, slacken the hoarding habit and make the country economically self-sufficient—a thing of immense national and imperial military importance in these days of international grabbing, rape and unprovoked aggression.

Suggestions for improvement

To help and encourage industrialisation industrial surveys and research should be organised, banking, and financing facilities should be developed, and managing agencies regulated; railway rates policy should be revised in favour of indigenous industries, trade commissioners should be appointed in foreign countries and wide propaganda and publicity should be organised for marketing facilities, greater protection should be given to indigenous industries to check foreign competition, industrial and technical education and foreign scholarships should be provided, and the foreign capital should be controlled by requiring foreign concerns to have rupee capital, three fourth Indian directors and to provide facilities for training Indians as foremen etc., and reserve a certain proportion of their capital for Indian subscription. Permanent Provincial Industrial Councils with a Federal Council for co-ordination and representing all vested interests, Industrial and Scientific Research Bodies, and a permanent Tariff Board should be established. Finally, the Government ratio policy should be re-examined and revised in the interests of industrial development.

Government and Industrial Development

We have already dealt with the economic and commercial policy of the E. I. Company in a previous chapter and seen how at first in its self interest it encouraged the development and continuance of the existing workshop industries but later on through pressure from vested interests and

dictation from the Parliament it had to discourage the manufacture of silk, cotton and other fabrics. The Parliament adopted a policy of heavy import duties on Indian manufactures imported into England and later on imposed a policy of free trade to stimulate the export of raw materials and food stuffs from India to England and the imports of British manufactures into the Indian market. While English manufactures entered the Indian market free or subject to nominal revenue duties, Indian manufactures were either prohibited or taxed heavily to protect English manufactures. This was characteristic of the doctrine of mercantilism or the old colonial policy which England followed in her interests. Ever since the 19th century, the dominant interest was not the development of Indian industries but of the Indian market for English manufactures and the Government industrial and commercial policy was framed accordingly. This policy of masterly inactivity and indifference otherwise called *laissez faire* continued unabated till the beginning of the present century. Even the Famine Commission which suggested the development of a number of indigenous industries to relieve the intensity of famines considered it undesirable to develop them with state aid and recommended only the provision of technical training, transportation and information. A few enthusiastic and far-sighted officers in the Provinces had made some notable attempts to encourage and develop industries. Sir George Watt, the Reporter of Economic Products made certain studies and many monographs on indigenous provincial industries were written and published and some industrial exhibitions like that of Calcutta (1884-85) were organised. Many Industrial surveys were undertaken between 1890 and 1914 in Bengal, the United Provinces, the Punjab and the Central Provinces and Bombay, but they were useful only for administrative purposes. In Madras attempts were made to develop an iron and steel industry (1833 and 1853) an aluminium industry, a tanning industry; an iron and steel industry in Bengal (1881) and one also in Kumaon district of U. P. A few experiments were also conducted in U. P. at state expense;

but most of these efforts ended in failure and heavy substantial losses. Such sporadic interests exhibited by the State in the industrial development of the country were too inadequate and upto the World War the industrial policy of the Government was confined to "a very imperfect provision of technical and industrial education and the collection and dissemination of commercial and industrial information.....All that was done was due rather to a few far-sighted individual officers than to any considered and general policy on the part of the Government."²⁶ The Provincial Governments in U. P. and Madras specially had committed themselves to a policy of active and direct help to industrial development and a whole time officer to supervise and stimulate technical and industrial education was appointed in Madras in 1899. On the recommendations of the Nainital Conference of 1907 it was decided to establish a Provincial Department of Industries in U. P. under a Director (1910) to obtain and disseminate industrial information, introduce new and stimulate old industries and control industrial and technical education. A loan of Rs. 7 lakhs was granted to the sugar factory in Gorakhpur district besides grants to various existing factories for their remodelling and a Government pioneer oil mill was started at Cawnpore under a European firm of managing agents for extracting cotton seed oil. More loans were granted to several industrial concerns, a depot for cottage industries was started at Cawnpore; a glass-worker and press-tool maker were imported and investigations into the possibilities of developing dyes and tanning materials were undertaken. In the meantime in 1905 a separate Imperial Department of Commerce and Industry at the instance of Lord Curzon had been created. But the European Commercial Community in Madras, who interpreted the efforts of the Provincial Government "as a serious menace to private enterprise and an unwarrantable intervention on the part of the State in matters beyond the sphere of Government"

were very strongly opposed to all direct and active state efforts to develop indigenous industries. After the Madras industrial conference of 1903 the Madras Government appointed a Director of Industries to control pioneer enterprises and practical industrial education and to establish a bureau of industrial information and an industrial museum. An Advisory Board was to assist him. But the enthusiasm of the Provincial Government was damped by Lord Morley, the then Secretary of State, who, in his despatch of 29th July 1910, doubted the utility of state efforts in creating new industries and was opposed to experiment and demonstration by Government agency on a commercial scale. He limited strictly State action to the provision of industrial instruction. "The policy which he was prepared to sanction was that State funds might be expended upon familiarising the people with such improvements in the methods of production as modern science and the practice of European countries could suggest. Further than this the State should not go, and it must be left to private enterprise to demonstrate that these improvements could be adopted with commercial advantage." The Madras Government, therefore, retraced its steps and limited its activities to provision of industrial schools. Lord Crewe, the succeeding Secretary of State, however, stated in his despatch of March 12th, 1912, that the Madras Government had placed too limited a construction upon his predecessor's despatch and he was prepared to allow the purchase and maintenance of experimental plant for the purpose of demonstration and for ascertaining the data of production. Pandit M. M. Malaviya also held the view in his Minority report of the Industrial Commission that the majority had exaggerated the "deadening effect produced by Lord Morley's dictum of 1910"; that Lord Morley was only opposed to the development of state managed commercial enterprises but was in favour of industrial and technical schools being opened by the Government. The Government, however, failed to do even this much. The Government of India, seemed to doubt "as to how far they would be justified

in sanctioning proposals for demonstration plants, financial assistance and other forms of direct aid to industries". They had neither the organisation nor the equipment to give effect even to the comparatively limited policy sanctioned by Lord Morley and their supine attitude to industrial development failed to utilize the exuberance of patriotic enthusiasm for Swadeshi and rehabilitation of home industries.

Besides U. P. and Madras, Directors of Industries were also appointed in the Punjab, Bombay and the Central Provinces and the Cooperative Departments in all the Provinces helped to organise, finance, purchase and distribute the products of Cottage industries. In Madras the industries department was reconstituted in 1914 and a Central Institute for dyeing, weaving and metal work was set up at Madura besides a tanning and leather school. The attempts of the Provincial Government to introduce glass, pencil, paper and oil-milling during the war proved a failure on account of difficulties of getting the necessary plant and experts from outside except the pencil factory which achieved a considerable success with imported cedar wood.

The Industrial Commission concluding the examination of the Government industrial policy said "how little has been achieved, owing to the lack of a definite and accepted policy, and to the absence of an appropriate organisation of specialised experts. Such experience as has been gained in the few attempts which have been made by the Imperial and the Local Governments is chiefly of a negative character; much valuable time has been lost, during which substantial advances might have been registered, and the outbreak of the war, which should have been proved an opportunity to reap the fruits of progress has served mainly to reveal and accentuate startling deficiencies."

On the recommendations of this Commission Departments of Industries were established in all the Provinces by the end of the War and the Indian Munitions Board of 1917 was merged up in the Imperial Department of Industries and Commerce. A Chemical Services Committee was also appointed to give

effect to the recommendations of the Commission for instituting an Imperial Indian Chemical Service but subsequently the plan was given up on account of the Reforms Act of 1919 which emphasised the development of Indian industrial resources for Imperial defence and made Industries a "Transferred" subject under the Provincial Governments. The Provincial Departments of Industries provide technical and industrial education, supply industrial and commercial intelligence, grant loans and push sales by organising exhibitions and setting up arts and crafts emporia. Unfortunately the Imperial Department of Industries as suggested by the Industrial Commission for coordinating the services of the Provincial Departments has not been set up and inadequacy of funds in the post-war period and budgetary deficits have prevented these provincial bodies from doing much useful work. Their activities are confined mostly to the encouragement of small and cottage industries and the part played by them in that behalf has already been reviewed in the chapter on cottage industries. Without a reorientation of the educational policy and unified and co-ordinated Government industrial policy to encourage the industries in all their aspects of manufacture, marketing, raw materials and finance it is impossible to achieve any substantial results from the establishment of Provincial Departments only. A regular planned industrial economy is the crying need of the country and the move of the Indian National Congress to appoint a National Planning Committee under the presidency of Pandit Jawahar Lal Nehru in 1938 was in the right direction. It is true that a little co-ordination has been achieved recently by organising All-India Industries Conference every year and by thus providing a common forum to the Provincial Ministers and Directors of Industries and representatives of Indian States. But that is not enough. There should be an Imperial Industries Department to co-ordinate the activities of the Provincial Departments and to organise and finance industrial and scientific research on the lines of the Imperial Council of Agricultural Research.

The Provincial Departments have failed to achieve success on a scale expected by the Industrial Commission because of the lack of a central organisation for industrial development with manifold duties which they had recommended. Some of these Departments have undertaken industrial surveys e. g. U.P. Bengal, Madras etc. and opened factories for peripatetic demonstration and established technical institutes to train students and grant foreign scholarships. In some Provinces for financial help State Aid to Industries Acts have been passed recently (Madras, Punjab, Bihar and Orissa, Bengal and C. P.) under which loans are granted to individuals and firms for establishing new industries; but such assistance is mostly confined to small and cottage industries. The financing of large scale industries is still left to Managing Agents and private firms and individuals. These Acts have failed to bring about industrial development on any substantial scale. On the recommendations of the Pochkhanwalla Committee of 1934 which was opposed to direct State aid to industries, the U.P. Industrial Financing Corporation with a capital of Rs. 50 lakhs has been started but most of the capital remains unsubscribed and the Benares Bank which took up 6 lakhs of the share capital suspended payment in May 1939. The chief reason for this has been strained relations between the employers and the employees. A similar Corporation has also been started in Bengal to help ex-detenus in being established as cottage industrialists.

Another way in which the Government have helped the development of industries in India in the Post-War period is through their *Stores Purchase Policy*. Before the War large indents for supplies of stores and materials to the army, and other departments—railways, municipalities and port-trusts etc., were usually sent to England and they were executed through the Stores Department of the India Office in London. Even if some of these stores and materials could be supplied locally, preference was given to English manufactures on the ground of quality, price, and the difficulty and expense of appointing an

inspecting agency. Many witnesses before the Industrial Commission complained that, inspite of the enunciation of the Government policy of purchasing, so far as possible, Indian stores and manufactures for public departments, and the framing of rules in that behalf to give preference to the indigenous manufactures or partially manufactured materials if they satisfied the conditions as to quality, price etc., orders had been placed abroad by the Director General through the India Office, in London. With the exception of the Railway Board and Ordnance Departments no other department had the requisite organisation to inspect local purchases and manufactures. The local manufacturers were at a disadvantage in competing with tenders received by India Office Stores Department and were called upon to supply small orders unexpectedly and at a short notice. Then there was an absence of standard types or patterns and the extreme diversity of orders for the same class of goods made it impossible to set up any special plant for their manufacture locally. Such a policy had a very deterrent effect on the development of new industries. The Commission found that in numerous instances in which preference had been given to British manufactures the articles would have been supplied by Indian manufacturers equally well both in respect of price and quality if the latter could have relied upon an established practice of local purchases by the Government. It therefore urged upon the Government the necessity, in the interests of Indian industries, of a radical change in the Government and railway stores purchase practice by adopting a more liberal policy of buying articles as were, or could be, manufactured in India. For the setting up of the suitable organisation and inspecting staff, it suggested the appointment of an expert committee to investigate the matter and recommended the establishment of an Imperial Stores Purchase Department with branches for centralised administration. Accordingly in 1921 on the recommendations of the Stores Purchase Committee the Indian Stores Purchase Department was established to supply the Central and Provincial Govern-

ments, railways, and other public and semi-public bodies and local authorities including Indian States. An expert inspecting staff has also been appointed. The Retrenchment Committee opposed even this small beginning and suggested that no expansion of the Stores Department should take place but the Government decided to continue the development of the Department which has now two purchasing branches at Bombay and Calcutta and inspecting agencies at Bombay, Cawnpore, Delhi, Karachi and Madras.

With increasing industrialisation in the country and the possibility of obtaining many requirements from the local manufacturers the Government have allowed since 1928 a limited degree of preference as to price in case of articles produced or manufactured in India. Preference in making purchases is given as follows:—*first*, to articles which are produced in India in the form of raw materials or are manufactured in India from raw materials produced in India, provided that the quality is sufficiently good for the purpose; *second*, to articles wholly or partially manufactured in India from imported materials, provided the quality is sufficiently good for the purpose; *third*, to articles of foreign manufacture held in stock in India provided that they are of suitable type and requisite quality; *fourth*, to articles manufactured abroad which need to be specially imported. To stimulate and encourage indigenous firms for supplying stores and materials, the *Rupee Tender system* has been recently adopted. It makes it obligatory on all provinces and departments to purchase stores generally on the condition that the delivery is made in India and the payment is effected in rupees in India. The Railway Board also follows a similar policy of preference to Indian goods and manufactures. Since September 1938 the Punjab Government have introduced new rules for purchasing stores. The Department through technical advice during inspection and purchase of commodities encourages improved quality of indigenous products; substitutes supplies of local manufactures without sacrifice of economy and efficiency

for supplies from abroad and maintains an exhibition of swadeshi articles at Imperial Secretariat, Delhi, and acts as a Central Bureau for technical information, inspection and purchase of stores even for Singapore, Ceylon, and Palestine.

Since 1935 the Department has an *Industrial Intelligence and Research Bureau* attached to it for the collection and dissemination of industrial intelligence, for collaboration of industrialists and Departments of Industries in industrial research and standardisation, for publication of bulletins concerning research and development of industries, for assistance and advice to industrialists in research and for assistance in the organisation of industrial exhibitions. Towards the close of the last year a Board of Scientific and Industrial Research was constituted under the presidency of Dr. S. S. Bhatnagar to stimulate the development of chemical and other industries. Let us hope that the Board will be permanent for the benefits of industry and will not be liquidated after the cessation of the present war. The orders placed by the Indian Stores Department and Contracts Directorate between September 1939 to December 1940 amounted to Rs. 76,50,00,000.

But the most important way in which the Government have helped the development of Indian industries in the post-war period is the *adoption of a policy of discriminating protection to indigenous industries*. The long and avowed policy of free trade and of maintaining the extensive "Indian market as one of the most valuable outlets for British industry and trade" had been given during the War and the post-war period to meet the persistent agitation of the Indian business and industrial community. "A recurrent annual governmental deficit, and a belief that Indian industry could contribute to imperial power:" the demand of the people for self-determination and tariff to protect the indigenous industries against all foreign competition after the War caused this change; and perhaps as a prize for loyalty and immense help in men, money, and materials in the Great War, the Secretary of State recognized

in 1921 the right of the Indian Government to fiscal autonomy. The Indian Fiscal Commission was accordingly appointed to examine the tariff policy including the desirability of Imperial Preference and to make recommendations. The Commission recommended a policy of "discriminating protection" and since its report protection has been accorded to the iron and steel, cotton, sugar, paper, matches, chemicals and tanning industries. But side by side with protective tariff the Government has also followed a policy of Imperial Preference according a preferential treatment to British goods in the Indian market. Under the Ottawa Agreement India also gets preference on some articles in England. The policy of Imperial Preference, however, is opposed to the best national interests. For the encouragement of improved marketing and industrial research cesses have also been imposed on some commodities like jute, cotton and sugar. The banking and credit facilities have also been improved recently but there is still no adequate machinery for industrial finance and capital. Transport facilities within the country are well developed but still there is great room for development and specially for a radical and sympathetic change in railway and shipping rates for the development of industries. Industrial educational facilities are also very inadequate and the organisation of commercial and industrial intelligence and marketing are very much defective. The Tariff Board should be transformed into a National Economic Board and industrial surveys should be undertaken by Provincial Economic Boards.

CHAPTER XVIII

ORGANISED INDUSTRIES

The Jute Industry :—Jute manufacturing is India's second textile industry and employs nearly as many hands as the cotton industry; but it presents several points of contrast. Firstly, it is practically confined to a single locality. Excluding 2 mills in the Madras Presidency and 3 each in Behar and U. P., and one in Raigarh State, all the other jute mills (36 in 1937-38) of India are located in Bengal Presidency on the low banks of the Hooghly for 35 miles above and 25 miles below Calcutta in a small strip of country about 60 miles long and 2 miles broad. On the other hand, the cotton industry is decentralised. Secondly, India or rather Bengal, has a virtual monopoly of the raw material on account of heat and abundant moisture for growing, many clear, clean streams for retting "and for transportation," cheap agricultural labour for tending, harvesting and stripping the plants; and with the advent of modern transportation the growth of a world market for a cheap packing material. Hence, the position of the jute industry in the international market is stronger than that of cotton. Thirdly, unlike the cotton textile industry, the management, direction and financing are entirely in the European hands though lately the ownership of the mills has passed more and more to Indians. It has been estimated by Dr. Buchanan that from 50 to 60 per cent of the jute mill shares are now owned by Indians, while according to Sir Basil Blackett the percentage was 66½% in 1930. Two large mills in Bengal also are under Indian managing agents; but the managers and their assistants are still Scotsmen. Fourthly, a jute mill is usually on a much bigger scale than cotton: the average number of workers employed in a single jute mill is three times as great as in the latter case. Unlike cotton, the preparation of jute involves less expensive and elaborate mechanical operations.

The jute mills are most efficiently organised. In fact jute is the best organised industry of India and its improved organisation has been the result of its centralisation. The Indian Jute Mill Association organised in 1836 aims at concerted production and unified action in times of emergency. To avoid over-production and consequential low prices and profits the Association during the eighties enforced shorter hours of work and shut down 10% of sacking looms for a short time in 1890. With the introduction of electric light in 1896 the working hours were increased which resulted in an agitation by the European assistants for a free Sunday and the Association persuaded the Local Government to take action but the Central Government refused to grant sanction. During the War high profits led to extensions and renewals and to over-production which after the close of the War resulted in an acute depression. The failure of monsoons in 1918-19 and 1919-20 caused jute prices to rise which with higher wartime wages increased cost of production when the demand had slackened. The Association thereupon brought Mr. Parks, an American expert, to advise them for forming a jute trust to control the price and production of jute and jute manufactures. But by the time that Mr. Parks submitted his report, the depression was over and a heavy demand for jute products led to the shelving of the report. Up to the outbreak of the present war the Association comprising more than 95% of the trade has been enforcing working agreements on its members for shorter hours of work. The Calcutta Jute Dealers' Association controls jute dealing for local consumption in the interests of its members. The Indian Central Jute Committee has been recently constituted by the Government of India with 26 members representing the trade and agricultural interests of Bengal, Bihar and Assam, and looks after agricultural, technological and economic research, crop forecasting, production and distribution of improved seed, inquiries about banking and transport facilities and improvement of marketing and collection and distribution of information.

The manufacture of jute fibres into coarse cloth by

handspinning and weaving is a very old industry in our country. People weaving jute often grew the crop and were classed as a separate caste—*kapalis* or sack-weaving caste and divided into two groups, those who weave the bags and those who sell them. With the growth of modern commerce there was a very considerable demand for packing materials and therefore, the gunny bag trade became the most important trade of the Bengal peasant. For the manufacture of cordage, ropes etc. for its ships a large quantity of jute had been exported by the E. I. Co. in 1795 and from that time onwards, a large quantity of woven cloth and gunny bags were being annually exported. In 1825-26 no less than 1 m. pieces were exported and by 1829-30 this export rose to 9 m. pieces. Till 1830 the manufacture of bags and cloth remained a monopoly of the Bengal weaver. As late as 1850-51 more than 9 m. pieces valued at more than 2 m. rupees were shipped from Calcutta alone, two-thirds of which went to America and the West Indies for packing cotton bales and the remainder to many Asiatic ports. Hand-loom jute weaving is still a cottage industry in one or two districts of Bengal.

Jute was first taken to Europe in 1795 for production of cordage materials and from 1825 onwards the power manufacturers of hemp and flax experimented with the fibre first mixing it with flax and tow and then softening it with whale oil in 1832, they succeeded in producing pure jute yarn in 1835. The growth of the industry at Dundee led to the stoppage of exports of jute manufactures and to the consequently rapid decline of the hand-loom industry in Bengal. The development of a considerable trade in bulky raw materials and food-stuffs consequent upon the development of steam transport led to an unprecedented demand for packing materials and with the increasing importance of jute for cordage, ropes, sacks etc., the cultivation of jute increased rapidly. The Crimean War by cutting off the supply of Russian hemp gave it a great stimulus and increased the importance and demand of jute. With the perfecting of the

machinery and organisation and with the growth of communication the industry migrated to India with Scottish enterprise and capital at the beginning of the 2nd half of the 19th century. From the last quarter of the 19th century the growth of the industry became very rapid in India and since the beginning of the present century it has registered a continuous and steady development.

With the increased demand during the Crimean War, the first jute spinning mill was set up in 1854 by Acland at Rishra near Serampore and the first power loom was erected in 1859. At first Acland experimented with reed grass to supersede hemp and flax and then brought machinery from Dundee. Only 8 tons of yarn per day could be produced for 2 years and with the introduction of hand-loom in 1857 the mill began to compete with the hand-loom weavers. Moreover, Acland suffered from financial difficulties and soon left the business. Then in 1859 another mill was started which within five years doubled its plant and within 13 years, it had "cleared its capital twice over". Two more mills were started in 1860 and one more in 1866. Thereafter between 1868-73 these mills "simply coined money" and paid dividends between 15 and 25 per cent. There was a boom and shares of jute mills were quickly subscribed. Capital was diverted from tea and coal to jute. A number of mills were established: 5 in 1871 and 8 in 1875 and their profits were depressed on account of over-production. The number of looms increased from 1,250 to 3,500. This rapid development of the industry was due to the monopoly of jute in Bengal, to its fine river system for transportation and to its proximity of coal mines. Dundee which had so far dominated the market was shut out from the Asiatic, Australian and even American markets after 1882.

The boom was followed by a crisis, the mills had a severe struggle for ten years and 4 new concerns had to close down. Between 1875 and 1882 only one more mill was started but expansion had increased the number of looms to 5,150 in 1882. The industry was thus over-expanded and there was a serious

depression in trade. By 1832 there were 20 mills in all employing 20,000 hands and of these 18 were in Bengal and 17 in the immediate vicinity of Calcutta. Upto 1875 the market for jute bags was still confined to Burma and India but thoreafter the demands from foreign markets gave a great impetus to the industry and between 1882-85, five new mills were added and looms increased to 6,700. The depression that followed led to the formation of the Jute Mills Association (1884) for regulating output by enforcing shorter hours of work. During the next ten years only one new mill was established but looms increased to about 10,000. Between 1882 and 1895, therefore, the progress of the jute industry was not as continuons as that of cotton. This was due to the fluctuating supply of jute and the unstable foreign demand. But the expansion of the industry unlike cotton took the form of extension of the concerns rather than increase in their number. Their output and number of employed and looms showed a continuous increase and this continuous development of the industry was reflected in the ever-growing export of jute manufactures. The average jute mill is hence a bigger unit. By this time there were 29 mills out of which 26 were located round Calcutta. Thereafter between 1896 and 1900 ten new mills were started with the recovery of world trade in food-grains and raw materials and looms increased to 15,000. There was a lull again for four years due to the severe famines in India and the consequent decline in the home consumption of jute bags, but extensions continued. Then nine more mills were started. The period between 1895-1914 witnessed great extensions of the existing mills, and the number of looms, and spindles increased in greater ratio than the hands employed on account of the employment of improved machinery and large scale management. But the period also saw the growth of competition in foreign markets from the State protected jute manufactures of America and Germany. The jute industry, however, continued to expand and increase and exported an ever-increasing quantity of jute manufactures besides raw jute. By 1913-14 there were 61 mills in all.

The Great war gave a great impetus to the expansion and development of the industry and there ensued a period of unprecedented prosperity. The war increased enormously the demand for sand-bags for trenches, grain bags, and gunny cloth for various purposes; very high freights and difficulties of importing machineries and stores prevented new competition with the existing mills, and to supply speedily the Government orders the operations of the Factory Acts were suspended, and later on the export of raw jute prohibited except under licence. Low prices and low wages and heavy Government orders, therefore, increased the consumption of raw jute by the Indian mills from 44 lakh bales in 1913 to 55 lakh bales during the war and exports of raw jute declined to 17 lakh bales in 1917-18. The invasion of Russia by Germany cutting off the supplies of Russian flax was also responsible for the rapid development of the industry. Very high net profits were earned: 58 per cent in 1915, 75 per cent in 1916, 49 per cent in 1917 and 73 per cent in 1918. The management of the mills profiting by the past vicissitudes of the industry provided handsome reserves and depreciation funds.

In spite of the taking over of all the stocks by the Government made on war account after the close of the war the industry faced a crisis. The war demands ceased, price of raw jute, after decontrol, and wages increased and the heavy war profits led to a flotation of new mills and large extensions and better equipments were planned by the old ones. There was a shortage of coal supplies in 1919 and 1920 and this led to the closing of many mills periodically. But the chief cause of the crisis was the world slump in industry and trade after the war boom and the resulting falling off of the demand. The Jute Mills Association enforced short-time working agreements to meet the crisis in 1919 and since that time upto 1929 the member mills worked only 4 days in a week. But on account of the extensions after the war the reduction in output was ineffective, and in 1924 therefore, the jute mills came to a "no extension" agreement. The industry, however, withstood

the shocks of the post-war depression admirably well on account of its excellent organisation, concerted working agreements, its semi-monopolistic position and the foresight of the management in strengthening the reserve and depreciation funds in prosperous years. The industry registered a substantial advance inspite of adverse circumstances and maintained the place of jute manufactures in India's exports which formed 14.46 per cent of the total value of merchandise exports in 1930-31. The war-time expansion was consolidated and the war average of jute consumption kept up. The number of mills increased from 70 in 1914-15 to 98 in 1929-30, the number of looms from 38,379 to 53,900 and of spindles from 7,95,528 to 11,40,435. The mills earned a profit of 90% on their capital per annum between 1915-24;¹ and Dr. Buchanan holds, that it is doubtful if any other group of factories in the world paid such handsome profits between 1915 and 1929.

The world slump after 1929 put a severe strain on the industry. Heavy fall in agricultural prices reduced the demand for jute bags on account of shrinkage in international trade. The jute crop of 1929 was heavier than the demands of the world trade and the crop of 1930 was a bumper one. A sudden drop in the price of raw jute increased the difficulties. Moreover in July 1929 finding their stocks satisfactory the mills increased the working hours from 54 to 60 a week. The increased output with a falling demand and low prices of jute depressed the industry. A propaganda to reduce the jute crop in 1931 succeeded in lowering production but still prices could not be forced up. The Jute Mills Association (95% of the trade) therefore, went back to 54 hours a week in 1930 and then to 40 hours a week in 1931 in October, and sealed 15% of the looms. This enforced restriction of output led to a dispute between the Association and non-Association mills. In addition to falling prices, heavy stocks in hand, and reduced demand the industry has had to face also serious labour troubles in the post-war period due to "scandalously low" wages and "simply staggering" profits. But during the world slump profits were depressed

very badly. The usual device of short time, to limit the output due to over-expansion, which the Association has frequently adopted since 1886, the systematic building up of reserves and depreciation funds in good years, concerted action in labour troubles and the semi-monopolistic position of the industry have stood it in good stead. The "short time" agreement of 1931 with a further clause not to plan any extension during the currency of the agreement continued till 1934 (November). Thereafter to increase production with a slight recovery in world trade $2\frac{1}{2}$ per cent looms were unsealed and by the end of 1935, $7\frac{1}{2}$ per cent more looms were unsealed in three instalments (May, August, November). Finally in February 1936 the remaining 5 per cent looms were also unsealed. With the exception of 5 mills, all the members restricted their work to 40 hours a week throughout this period. The five excepted mills worked 54 hours a week with full complement of machinery. In August 1932 the Association entered into an agreement with 5 mills outside the Association whereby the latter agreed to work 54 hours a week. This agreement as also the one between the Association mills terminated in March 1936 when a fresh agreement was made between the Association mills to work not more than 54 hours a week on single shift and with no night work and with a clause not to extend their operations during the currency of the agreement. From March 1937 this agreement was suspended and the mills were given liberty to work any hours and install any machinery. This unrestricted production caused a fall in prices and labour troubles worsened the situation. Thereupon in 1938 the position was reviewed and from 15th March 1939 an agreement limited the working hours between 40 and 54 a week. From 31st July 1939 the mills agreed to work 45 hours a week with 20 per cent hessian and $7\frac{1}{2}$ per cent sacking looms sealed. With the outbreak of the present war, however, all these restrictions were removed to enhance production to meet the large overseas and the Government demand for sand-bags, and hessian cloth etc., and all the mills were working 60 hours a week. Increased

prices also led to increased profits. But as the first year of the war rolled on, the jute industry which was very prosperous at the beginning of the last year, received a set-back owing to the drop in sand-bag orders, the chief cause of high prices. Working hours therefore had to be reduced from time to time to arrest the downward trend of prices. During the first 8 months prices declined by nearly 51 per cent. Since then conditions have improved due to a new large sand-bag order, the restriction of the jute crop by the Bengal and other Governments and the increased interest showed by overseas countries in jute manufacture.

The number of mills in 1937-38 was 105 out of which 96 were in Bengal, 3 each in Bihar and U. P., 2 in Madras and 1 in C. P. With the increase in mills there has also been a remarkable improvement in products. Coarse gunny bags have been replaced by hessians to a very great extent and $\frac{3}{5}$ of the looms are now hessian looms. Bengal now consumes $\frac{2}{3}$ of the jute crop and produces twice as much of jute manufactures in bags, hessians and cordage as the rest of the world and the jute industry is by far the most efficiently organised and centralised industry in the land. Its only unsatisfactory feature from a national point of view is its foreign management and the absence of any scheme to train Indians to carry out alone the whole process of manufacture. "From $\frac{1}{2}$ to $\frac{2}{3}$ of the shares are now owned by Indians" and "another 25 years may witness their definite control over this Scottish stronghold."²

The total shipment of gunny bags and cloth and exports of raw jute in the past 3 years were as under :—

	1936-37	1937-38	1938-39
Bags (sacking & gunny) in millions ...	621	612	598
Cloth in m. yds. ...	1,710	1,643	1,550
Raw jute (in m. tons) ...	821	747	690

Cotton

Cotton is by far the most important factory and textile industry of India. In 1939 there were 389 mills ³ with 1,00,59,370 spindles, 2,02,464 looms and 4,41,949 daily average employees. No less than 3,810,734 bales of 392 lbs. each were consumed by these factories. India is now one of the leading cotton manufacturing countries of the world: she ranks fifth in number of spindles, fourth in quantity of raw cotton consumed; third in number of persons employed and second in raw cotton production. It produces 1/5 of the world's annual supply of raw cotton.⁴ The Indian mills and handloom industry between them satisfy now 2/3 to 3/4 of the enormous demands of the home market and a small export trade in cotton manufactures to Africa etc. has recently grown up. This industry is owned, manned and financed by Indians mostly. Throughout the whole course of its development since the middle of the 19th century the industry has shown a steady and continuous progress without any protection from the Government until 1921. In fact "for India cotton manufacture is ancient glory, past and present tribulation but always hope." ⁵

Cotton enjoys an ancient and honoured glory and India has been the home of the cotton cloth from the earliest times. Famed as "white wool" the Indian cotton cloth was well-known to the ancients and formed an important article of trade with the West in the days of the overland routes. Its calicoes, named after the fine textures of Calicut piece-goods, and the Dacca muslins, still the finest that human skill can produce, enjoyed world-wide celebrity and with spices, silks and precious stones led to the discovery of the new sea-route to India. Indians had developed very early the art of making cloth from cotton fibre and had perfected it to a remarkable workmanship. Babylon traded with India in 3 000 B. C. and mummies in Egyptian tombs dating

3. *Indian Year Book (1940-41).*

4. *Buchanan op. cit. page 199-200.*

5. *Buchanan op. cit. p. 195.*

from 2,000 B. C. have been found wrapped in Indian muslin of the finest quality. There was a very large consumption of Indian manufactures in Rome and the muslins of Dacca were known to the Greeks under the name of Gangetika. All these and other accounts given by historians and travellers leave no doubt that in India the arts of cotton spinning and weaving were in a high state of proficiency two thousand years ago; whereas cotton weaving was only introduced in England in the 17th century A. D. Cotton cloth always occupied a position of great significance in the relations between the orient and the occident. At least as early as 445 B. C. cotton was the usual clothing. Embroideries, streaked silks, tufts of gold turbans, silver and gold cloth, brocades, net work of gold, carpets of silk and gold, satins with streaks of gold and silver, fine chintz were the specialties of the hand-loom. "Its fabrics, the most beautiful that human art has anywhere produced, were sought by merchants at the expense of the greatest toils and dangers." Many economists and historians have paid glowing tributes to the beautiful muslins and fine calicoes produced by the hand-loom weavers of India and exported to Europe as late as the 18th century. The "Woven Wind" of Dacca was made of counts above 400 and a sari large enough for a full grown woman could be drawn through an ordinary finger ring.⁶ Bengal, Coromandel Coast, the Indus plain and the region round about Gulf of Cambay were the centres of the cotton production.

Later on, cotton yarn was carried to Europe to be woven there and finally the cotton industry was revolutionised by power-driven machinery in England. Cotton was grown and ginned in America and a great occidental industry of England came back to crush the parent from which it sprang. One of the principal reasons for England's assumption and retention of political control over India has been to provide a market for Lancashire cotton cloth.⁷ The E. I. Co. was formed at the

6. Buchanan : *op. cit.* p. 191.

7. Buchanan *op. cit.* p. 191.

eve of 1600 to carry the manufactures and other commodities of India to England and Europe. "At the end of the 17th century great quantities of cheap and graceful Indian calicoes, muslin and ohintz were imported into England, and they found such favour that "the woollon and silk manufacturers were seriously alarmed. Acts of Parliament were accordingly passed in 1700 and 1721 (which remained in force until 1825) absolutely prohibiting, with a very few specified exceptions, the employment of printed or dyed calicoes in England either in dress or in furniture and the use of any printed or dyed goods, of which cotton formed any part." ⁸ At the beginning of the 19th century cotton was the most important industry and had given rise to painting and printing of colours and preparation of vegetable dyos. Several weaving castes were organised in trade guilds. The E. I. Co., bought cloth from weavers, financed by it, and got it bleached and dyed in its workshops or factories for export. In the first four years of the 19th century inspite of all prohibitions and destructive duties (20 to 50 per cent ad valorem in 1803) 15,000 bales of cotton piece goods were annually shipped from Calcutta to U. K. In 1809 the rates were increased to range from 47 to 81 per cent. The figure rapidly fell down to 1813 when the opening of the trade to private merchants in that year caused a sudden rise in 1815 but the increase was temporary. In 1787, the exports of cotton muslins only amounted to 79,000 valued at 30 lakhs of rupees but in 1817 they had ceased altogether. In 1819 the duties ranged from $37\frac{1}{2}$ to $67\frac{1}{2}$ per cent ad valorem. After 1820 the manufacture and export of cotton piece goods declined steadily, never to rise again. To crush the Indian industry not only Indian manufactures were shut out from England but a deliberate endeavour was made to use the political powers of the E. I. Co., to discourage the manufactures of cotton and silk goods in India. The manufacture of silk fabrics was discouraged and the silk winders were forced to work in the Co.'s factories

and prohibited from working in their houses. The Indian cotton manufactures were subjected to very heavy duties whereas English cotton piece-goods entered India free or subject to a nominal duty. The application of steam engine and the power loom in the meantime revolutionised the British cotton manufactures and made it the most formidable competitor of our cloth trade both in the home and the foreign markets. A policy of free trade and the arm of political injustice strangled our cotton manufactures.

To this ancient industry, the factory system began to be applied since the middle of the last century although the first cotton mill had been started in 1818 near Calcutta. The real foundation of the cotton mill industry was laid in 1851 when Bombay Spinning and Weaving Company was started by C. N. Davar which began to operate in 1854. The industry grew up round Bombay on account of its geographical location, moist climate, historical antecedent, nearness to raw material and facility of importing coal and exporting yarn to China and Africa and abundance of capital and credit provided by the cotton boom. But after 1877 the industry spread to up-country towns in the heart of the cotton belt like Nagpur, Ahmedabad, Solapur, and with the spread of the railway net large centres for marketing were developed within the country. These centres had also marked advantages in cheap labour. The trade in yarn with China declined and deprived Bombay of its pre-eminence by the beginning of the present century, and the surge of Swadeshi led to the development of spinning and weaving factories in Cawnpore, Calcutta, Madras, Madurai and Agra etc. Bombay Presidency has also suffered from a deficiency of power: "in 1926 freight on coal from Bengal to Ahmedabad was more than double the original cost of coal." Formerly wood was burnt but later on coal began to be imported from England and Africa by Bombay but it was also expensive. Since the beginning of the present century, however, this difficulty has been

solved by developing hydro-electrical power from the Western Ghat Falls but this is also relatively expensive for the Bombay mills as compared to the Mysore hydroelectric rates to the cotton mills. The recent Factory Acts and their enforcements have tended to drive cotton factories from British India to the states where they are more lax.

For a decade upto 1861 the growth of the industry was very slow and hardly a dozen mills had been started. Then the American Civil War (1860-65) caused a boom in cotton trade. The price of raw cotton rose very high, a huge quantity of it was exported to Europe, and the large profits earned therefrom provided a large capital for investment in the cotton factories. The profits of the opium trade with China and the development of yarn trade with it acted as a further stimulus. The maritime position of Bombay gave it the advantage of proximity to the export markets and its situation behind the Deccan cotton belt and the opening of the Suez Canal reducing the price of imported coal from England further gave an impetus to the cotton industry. But upto 1865 there were only 10 mills with 250,000 spindles and 3,400 looms in Bombay. This was due to high price of cotton which hit hard both mill and handloom industry; the trade depression following the boom and reckless flotation of companies resulted in a crash of credit and financial machinery. By 1871 there was a recovery from the crisis. In 1872-73 there were only 20 mills in all but thereafter with the revival of confidence the increase in their number became very rapid and in Bombay the number of mills increased from 19 in 1874 to 26 in 1875, 39 in 1876 and 42 in 1878. By 1879 there were 56 mills with 1,453,000 spindles and 13,000 looms. The preponderance of spindles over looms shows clearly that most of these mills were only spinning factories. *In fact upto the end of the last century the production of yarn was the most important feature of the Indian cotton mill industry.* This yarn was exported to China and Japan and was also consumed by the indigenous handloom weavers.

In addition to spinning and weaving, many ginning and pressing factories grew up to facilitate the export of raw cotton by 1880. It was only after the American Civil War and the development of the railways and steamships that steam presses and gins were introduced in the cotton tracts.

Between 1880 and 1890 the growth of the industry was steady and continuous and the number of mills increased from 58 with 1,407,830 spindles and 13,307 looms to 137 with 3,274,196 spindles and 23,412 looms. The reasons for this remarkable growth were the increasing yarn trade with China and Japan during the eighties, the cloth trade with Africa and Arabia and the fact that the cotton mill industry with steady profits came to be regarded as a secure form of investment. The industry began to disperse to up-country towns during this period, better machineries were introduced and finer yarns and a variety of cloth were produced and newer markets (Straits Settlement and Ceylon) developed. The exports of twist and yarn increased from 26,704,716 lbs. in 1879-80 to 170,518,804 lbs. Moreover the period was singularly free from any severe famine and wide fluctuation in prices or exchanges. The industry upto this time owed but little to tariff which was 10 per cent for piece-goods from 1859-'62, 5 per cent from 1862-'78. In case of yarn there was a 5 per cent duty in 1859-60, 10 per cent in 1860-61 and $3\frac{1}{2}$ per cent in 1862 to 1882. There was no duty on coarse piece-goods from 1878 to 1882. In 1882 the duties on both yarn and piece-goods were abolished and were not re-imposed until 1894.

From 1890 the cotton mill industry had to face three difficulties viz., the Japanese competition in yarn trade in China; the growth of the Chinese cotton spinning industry and the effects of the closing of the mints to free coinage of silver in 1893. The period after 1890 also witnessed recurring famines of great intensity and growing severity. The suspension of free coinage of the rappee divorced it from the silver dollar of China and made the yarn trade with China a highly speculative business. The

loss of the Chinese and Japanese markets led to the decrease in exports of twist and yarn and there gradually developed an export trade in raw cotton to Japan. The Bombay mills were forced to take to the production of piece-goods instead of yarn. A definite tendency to increase the looms set in from this period and between 1890-95 the number of looms increased from 23,412 to 35,338 while that of spindles from 3,274,196 to 3,809,929 and the number of mills increased to 148. *The progress of the industry was therefore unimpaired inspite of unfavourable circumstances.*

Between 1895 and 1900 the industry suffered from a serious depression. The two terrible famines of the period depressed the agriculturists' purchasing power and the hand-loom weavers and thus the market for yarn shrank rapidly. Then the virulent outbreak of plague in Bombay in 1896 caused the labourers to flee away in terror and thus it cut the regular labour supply. This scourge was followed by the second famine. This depression continued until 1905. Besides famine and plague, the American cotton speculation of 1902 inflated the cotton prices to a very great extent and this prevented the production of coarser piece-goods by the Indian mills on a profitable scale. Then the changes in the Indian currency system linking it with the gold standard countries disturbed the Indian yarn market in China which was also developing its own spinning. This gave a severe blow to the spinning industry in Bombay. An import duty of 5 per cent on piece-goods and yarn together with a countervailing excise of 5 per cent was imposed in 1894 which continued till 1896 and after it no import duty with a countervailing excise of 3½ per cent on piece-goods alone was imposed. Inspite of these setbacks the industry registered a steady and rapid growth and the number of mills increased from 148 in 1895 to 197 in 1905 when the number of spindles was 5,163,486 and of looms 50,139. There was an overstocking of yarn in the Chinese market and the consequent falling off in its demand.

Then followed a period of boom in 1903 to 1907 and thereafter a steady growth of the industry till the outbreak of the Great War. The boom in yarn trade and the fabulous dividends of the spinning mills spell an unprecedented prosperity for the Bombay mills. High prices, brisk demand, and the introduction of electric light led to longer hours of work. The enthusiasm for Swadeshi in the wake of the Partition Movement in Bengal stimulated very powerfully the growth of the industry. This movement was responsible for the remarkable growth of weaving as compared to spinning. By 1907 there were 224 mills with 5,333,273 spindles and 58,436 looms. This feverish activity led to the over-stocking of the China market again and this with the world depression in 1907 led to short time especially in the spinning mills. But thereafter the industry recorded a continuous growth till the out-break of the War in 1914 except for the set-back caused by the acute banking crisis of 1913. *The chief features of the industry by the time of the War were an ever-increasing tendency to tap the home market, to replace the production of yarn by that of woven goods and the consequent greater growth of looms than spindles and finally the production of finer yarn with imported American cotton and finer piece-goods with improved machinery and with imported as well as home produced better yarn. This tendency is more pronounced now in Ahmedabad, Bombay and Sholapur. The production of dyed and bleached goods has recently increased very rapidly. The spinning of finer yarn was however limited by the higher costs of imported cotton and machinery and therefore the mill-owners were interested in the growth of improved variety of longer staple cotton in the country. The growing competition of Japan and Lancashire in the China and the home markets, the instability of the China market and the fluctuations of the home demand with agricultural conditions and the failure to develop newer markets led to these changes. By 1914 there were 271 mills with 6,778,895 spindles and 1,04,179 looms. Thus between 1890 and 1914 in spite of vicissitudes the number of*

mills increased by 98 per cent, of spindles by 107 per cent and of looms by 345 per cent, while the spindles more than doubled; the looms increased by four and a half times.¹⁰ The exports of twist and yarn declined from 244m. lbs. in 1899-1900 to 193m. lbs. (pre-war average of five years).

The Great War: Immediately before the War the cotton mill industry was not in a very good condition in both spinning and weaving due to the banking crisis, but from 1916 it experienced a powerful boom which lasted until 1920-21. The war by shutting out foreign competition, especially from Lancashire mills, which on account of higher freights and shipping shortage and increased revenue duties on cotton imports into India was labouring under a serious handicap, afforded an indirect protection to the home industry. *High prices, brisk demand in the home market and large Government orders created an extremely favourable position for the expansion of the industry. Fabulous dividends were earned and large extensions were planned* which however, could not be executed during the pendency of the War because of the serious difficulty of importing machinery, dyes, and other stores and materials due to their high prices and shortage of tonnage. New mills therefore could not be built but looms multiplied although spindlage remained more or less constant. The size of the production unit therefore expanded. The number of mills actually declined from 271 in 1914 to 253 in 1920, but spindles decreased from 6,778,895 to 6,763,876 and looms increased from 1,04,179 to 1,19,012 and the number of daily average employees also increased by over 51,000. Looms thus increased by 15 per cent and the output of woven goods by 46 per cent. The production of yarn increased for home consumption but the export to China due to the difficulties already mentioned and to transport difficulties and competition from both China and Japan declined heavily. The keen demand for yarn at home to supply piece goods to the Home market and to

10. H. L. Dey: *Indian Tariff in Relation to Industry* p. 95.

Persia, East Africa, Mesopotamia, Ceylon, Malay and Straits Settlements caused the manufacturers to neglect the foreign market in yarn. In the pre-war quinquennium 30 per cent of the total yarn output was exported. The war average of exports of yarn was 130 m. lbs., post war average 82 m. lbs. Imports of piece-goods on the other hand fell from an average of 2,632 m. yds. per annum during the pre-war quinquennium to an average of 1,841 m. yds. during the war years and this afforded an opportunity to the mills to capture the home market for finer, and coloured goods also. The pre-war tendency of providing more of finer counts and better quality piece-goods than twist and yarn therefore increased apace and a considerable increase in counts 21s. to 40s. took place while that of counts below 20s. was below the war average. This change from coarser to finer counts led to an increasing consumption of East African medium stapled cotton and this explains the decline in consumption of raw cotton by the mills. By 1921 spindles increased by 14 per cent and looms by 19 per cent and the average number of daily employees by 28 per cent.¹¹ Wages did not increase until 1920 and this fact kept the costs below the level of the yarn and piece goods prices, inspite of the difficulties of higher costs of stores and dyes etc., and of obtaining coal. The capital investments of the industry mounted from 20·84 to 40·98 crores of rupees between 1917-18 and 1921-22.

These boom years constitute a period of high prices and fat dividends. The annual average prices of cotton manufactures in 1918-19-20 were three times as great as those of 1914. 40·1 per cent on the paid up capital in 1919; 35·2 per cent in 1920 and 30 per cent in 1921.¹² With an average paid up capital of about 13 crores the mills in Bombay earned an average annual profit of 5·65 crores of rupees i. e., more than two and a half-times the entire paid up capital. And similar profits were made

11 *H. L. Dey: op. cit. p. 99*

12 *Jathar and Beri : op. cit. p. 92*

by up-country mills also. These enormous profits could not be re-invested in the expansion of the industry by importing machinery and plant until 1920-21 because of the war and thereafter of the huge orders for supplies received by the engineering firms of America and Great Britain. Therefore the great expansions planned were executed during 1921-22 to 1923-24 when the average number of spindles and looms added per annum were 480,823 and 9,234 respectively.^{1 3} Thus the post-war boom lasted longer in case of the cotton mill industry than in others. As a result of this boom the number of mills increased from 253 in August, 1920 to 336 in August 1924, that of spindles from 6,763,876 to 8,313,273 and of looms from 1,19,012 to 1,51,485.

Post-war Depression:—Although the post-war depression began after 1920 our cotton industry began to feel its impact only after 1923. The general depression, reduced purchasing power of the cultivators all over the world due to a drop in world agricultural prices since 1920, wide fluctuations in cotton prices in India on account of American supplies and prices since 1917, the exchange difficulties intensified the financial embarrassments of the cotton industry specially in Bombay. By 1922-23 the boom disappeared, prices fell, profits decreased and the depression grew apace. It was so severe in 1923 that inspite of three successive favourable monsoons and the temporary elimination of Japanese competition due to the severe earth-quake the industry could not hold its own. The increase in the ratio from 1s. 4d. to 1s. 6d. from 1925 onwards put the industry in a very tight corner during the depression, while the depreciation of the yen stimulated Japanese exports to India between 1923 and 1925. The Japanese poured goods into the country in large quantities and depressed the prices of the local mills and ousted the Indian mills from the Chinese and Japanese markets. Japan became an exporter of yarn and piece-goods to our country during the war but the increase in Japanese imports into India was not so much felt during the

war because the Lancashire imports had declined. The Japanese imports of piecegoods increased from a little over an annual average of 3m. yds. in the pre-war quinquennium to an average of over 97m. yds. during the war.¹⁴ From 1916-17 these imports began to rise very sharply and reached the abnormal figure of 238 m. yds. in 1918-19, after this they declined heavily for two years. Since then the increase was continuous and in 1929-30 Japanese imports amounted to 592 m. yds. Japan in fact is the most formidable competitor of Indian mills in grey, coloured, and white goods although in yarn production this competition is not so severe in counts below 30s. as in counts above 31s. and 40s. Japan has been even able to undersell the local manufacturers on account of the greater efficiency of her labour force, better climatic conditions, greater employment of cheap female labour, better purchase and sale organisation, more attractive designs and her disregard of the Labour Conventions with regard to hours of work, employment of females and youngmen in night etc. As the Tariff Board pointed out in 1927 "Double shift working in Japan gives Japanese industry an advantage of 4 per cent on the actual cost of manufacture of both yarn and cloth." The management of Japanese mills is superior.

The fall in prices of cloth began in 1921, was very great in 1921-22 and it continued till 1931-32 when it reached the level of 1913-14. Wages which had also gone up during the boom could not come down with the fall in prices specially in Bombay. The mill-owners there had met the demand for increased wages between 1917-1920 by grant of dearness of food allowances and by payment of annual bonus of one month's pay dependent on the profits. The depression was aggravated by the remarkable increase in the productive capacity of the industry on account of large extensions and now mills the effects of which began to be felt only after the passing of the boom. "The new concerns started had, of course, incurred capital expenditure at the boom level of price and these high capitalisation

charges were still further increased in most cases by the turn that exchange took in 1920."¹⁵ Finally, the depression was due to the grave defects in the internal organisation and management and marketing and financial arrangements: "over-capitalisation, absence of technical experts on the boards of directors leading to expensive mistakes; improper handling of machinery which is also not replaced sufficiently often by new machinery; absence of up-to-date labour-saving devices; uneconomical handling of cotton, coal, waste and stores; absence of a systematic plan of short time when demand is slack; defects of the selling agency system and absence of any satisfactory system of finance."¹⁶ The managing agency system has been the root cause of many of these abuses in internal organisation and management. Over capitalisation in Bombay was largely due to changes in the managing agencies and in capital e.g.; the Sassoon group of mills with a book value of assets worth Rs. 2'75 crores were sold for Rs. 6 crores. Concentration of control and plurality of directorships which are largely ineffective and inefficient, lack of technical qualifications among the directors, clanish and hereditary principle of organisation which makes managing agency a family business, the treatment of the mills as their private property, exploitation and fraud, incompetent management, dubious methods of remuneration on purchases and sales, ignorance and indifference of the directors controlling a "vast and heterogeneous collection of businesses", irresponsibility of the shareholders and their helplessness—these are the patent evils of managing agencies which dominate the cotton mill industry. "Another common defect is that many mills depend for working capital mainly on short term deposits, cash credits and loans, all of which are apt to be drastically curtailed in difficult times."¹⁷

15 Gadgil : *op cit.* p. 240

16 Jathar and Beri. *op. cit.* p. 32

17 Vera Anstey : *The Eco. Dev. of India* p. 275

In spite of the depression, however, the industry made a continuous progress and the number of mills increased to 344, of spindles to 8,907,064 and of looms to 1,74,992 by August 1939. The depression continued on account of the world economic blizzard after 1929 upto 1933 and thereafter the industry recorded a remarkable progress by 1938-39. The chief reasons for this steady development of the industry during the period of the depression have been the political upheavals and intensification of the boycott of foreign goods, the swadeshi movement, the grant of protection by the Government and the regulation of the managing agency system since 1936. The industry has shown great vitality, the extinction of the China yarn market has led to a remarkable expansion of the weaving side and diminished the dependence of India on foreign cloth supplies.

As regards the present war, the cotton textile industry was not benefited by the war to any appreciable extent. Production during the first eight months shrank by about six per cent and prices dropped by about 11 per cent. Thereafter the industry began to show signs of healthy improvement owing to the broadened demand both at home and abroad. The reduction in import duties on British piece-goods did not prove of use to the Lancashire industry, while arrivals of Japanese piece-goods also shrank. On the contrary, India's exports of cotton manufactures increased by about 40 per cent.

The depression more particularly hit hard the *Bombay Cotton Mills* than the up-country mills. There were many causes for this relatively greater depression or 'atrophy' in Bombay: (a) *Reckless Financial management*:— During the boom (1917-22) the mills made very heavy profits which were frittered away in distribution of fat dividends and were not utilised for building up adequate reserves. The percentages of dividends on paid up capital of these mills were 22·2, 23·7, 40·1, 35·2, 30 and 16·4 in these six years. "If the mill-owners

of Bombay had followed a cautious policy of dividend distribution and built up a suitable reserve fund, they could have continued to give a reasonable dividend to the shareholders and at the same time succeeded in maintaining a strong financial position "to tide over the difficulties of the depression that inevitably followed the boom."¹⁸ Instead they allowed themselves and their shareholders to indulge in a policy of extravagant dividends with the result that when the losses of the period of depression appeared, they had insufficient reserves to meet them. Therefore "the atrophy was due partly to lack of foresight on the part of the management and partly to the wild desire of the shareholders for abnormal rates of dividends." The Tariff Board, however, thought that the rates were not higher than those in Japan.

(b) *Over-capitalisation* caused by changes in managing agencies and capital due to sales and resales and recapitalisation to accord with the boom earnings. Between 1917 and 1925 the paid up capital of the Bombay Mills increased by 151% while their spindles and looms increased by 18% and 24% respectively. Or there was an advance of 53% in average capitalisation per spindle in the Bombay Cotton Mills between 1918 and 1925. The Tariff Board has cited the example of 12 mills whose capital increased by over 12 times between 1918 and 1923 though their equipment increased only by one half. Since 1926 however, the average capitalisation per spindle has been considerably reduced. Thus, by revaluing their assets in boom at inflated prices the mills obviously created big reserves and issued bonus shares out of them. The sales of old shares and the issue of new ones at several times their normal capitalised value led to stock-watering and speculation; and the payment of fat dividends on such inflated capital prevented accumulation of reserves and caused financial weakness. When the depression came therefore the boom prices disappeared but the capital remained inflated. Normal methods of financing

by bank over-drafts and public deposits were withdrawn and to meet their establishment charges, interest etc., the weaker mills released large stocks on the market and depressed the prices even for the stronger ones and inflicted losses on them. To eliminate this unfair competition and waste the real remedy was rationalisation and absorption of weaker mills by the stronger mills. Between 1929-30 an attempt was made to amalgamate 35 mills by Sir N. Wadia and a Lancashire expert was engaged for their revaluation but the scheme was given up later on when protection was granted to the industry by the Government.

(c) *Increased severity of competition from Japan and from up-country mills:* The loss of yarn export to China due to the Japanese competition and the growth of textile industry in China has made the position of the Bombay mills very difficult and compelled them to rely on the home market only. Foreign markets have not been so far vigorously tapped. Even China has recently begun to export yarn to India. According to the Tariff Board about 40% of the Japanese imports compete directly with the staple products of the Indian mills. But in recent years it has been the severity of internal competition from the up-country mills from which the Bombay mills have suffered. Formerly, Bombay enjoyed a superiority in her favourable site, better climate, and greater skill of her mill labourers. She was dependent on export of yarn to China for which her maritime position was a greater advantage. Moreover she could import machineries and stores and raw cotton more cheaply from abroad. But tariff and competition in foreign markets deprived her of her export trade and her better climate could not offset the great disadvantage in freights and cost of the raw material. It has no assured local market and does not produce goods superior to the up-country mills. The Tariff Board calculated that one-way railway freight on cloth from Bombay to Sholapur (283 miles) is equal to the freight on raw cotton from Bombay to Japan and the carriage of cloth from Japan back to

Bombay. Except Bombay, therefore, there has been an increase in the number of mills in other centres and therefore the relative importance of Bombay has declined on account of a lower rate of growth in the number of spindles and looms and of diminishing efficiency in average output per spindle and loom. Between 1898 and 1925 while the number of mills in the whole of the country increased by 65% that in Bombay remained stationary so that the percentage of Bombay fell from 44.3 to 28.8, in spindles from 51.4 to 41.7 and in looms from 58.2 to 48. Between 1926 and 1936 the number of mills decreased from 78 to 66 in Bombay while that of Ahmedabad increased from 59 to 79. In 1930, 25 Bombay mills were closed down.

(d) *Comparative disadvantages of Bombay:* Bombay has experienced more grave and recurring labour troubles and the trade unions there are better organised and more powerful. Between 1921 and 1929 there were 8 strikes in the Bombay Cotton Mills affecting a very large number of them involving 317 disputes and a loss of thousands of working days. Other centres were comparatively less troubled by labour troubles in the same period. Then the cost of production is higher in Bombay (30% above Ahmedabad) due to higher wages, oil fuel or coal charges, larger municipal taxes for water and rents. This is a permanent handicap to Bombay. Moreover, the up-country mills are in the heart of the consuming centres and near the tracts of raw material and hence they make considerable economies in transport charges. The Bombay mills have not tried to produce a variety of goods to capture the up-country markets.

(e) *Unprogressiveness of the Bombay Mills:* The grave defects of the managing agency system are perhaps more pronounced in Bombay. According to the Tariff Board the liquidation of many mills was due to *incompetence and inefficiency* and, in some instances, to dishonesty. The Bombay mills have not left the production of coarser goods, nor have they taken to higher counts, nor established direct contact with the consuming

centres and their sale agencies have been very weak. Their disadvantage in marketing can be reduced by establishing their own sale agencies and better contact with important distributing and consuming centres and by setting up a strong selling organisation for export markets. Their incompetence and inefficiency can be overcome by rationalisation and amalgamation and by the introduction of efficiency measures and co-operation of the operatives through schemes of unemployment relief and improved remuneration. The loss of the yarn market in China has been compensated in recent years to some extent by the growing cloth markets in Africa, Arabia, Persia, Ceylon, Malaya and Straits Settlements but their utility can be enhanced by establishing a selling organisation with branch offices overseas and by engaging selling agents and commercial travellers and periodical visits of the mill-owners themselves. To popularise their goods in the home market they should organise exhibition cars displaying a rich variety of goods manufactured by them. To consolidate their advantage in imported cotton for the production of finer yarn they should form an association like that of Japan for the purchase of raw cotton at concessional freight rates.

Protection : Upto 1921-22 tariff has played little part in the steady development of the cotton industry. An import duty of $3\frac{1}{2}\%$ on cotton manufactures with a countervailing excise of the same percentage was imposed in 1896 and this remained in force till the year 1917-18, although the general rate of the import duty was increased from 5 to $7\frac{1}{2}\%$ in 1916-17. In 1917-18 the cotton import duty was raised to the general level of $7\frac{1}{2}\%$ but the excise was retained at $3\frac{1}{2}\%$. This introduced an element of protection. In 1921-22 to wipe out the budget deficit the import duty including cotton was raised to 11 per cent while the excise remained at $3\frac{1}{2}\%$. This put a differential burden of $7\frac{1}{2}$ per cent on imported piece-goods but the exemption of all machinery and mill stores from import duty was withdrawn. In 1922-23 the Finance Member proposed to

increase the general rate to 15% and the excise to 7½% but the Assembly opposed the increase in excise and therefore the import duty on piece-goods was retained at 11%. A 5% duty on imported twist and yarn which was on the free list since 1896 was also imposed. The Fiscal Commission recommended the abolition of the excise duty immediately but the Government of India pledged themselves to its abolition as soon as their financial position improved. The depression from 1923 causing low prices, reduced sales, decreased profit and even losses, accumulated stocks and intensified competition hit very hard the cotton mills of Bombay and to some extent of Ahmedabad. Since 1924, therefore, the Mill-owners' Associations of the two centres began to canvass for the abolition of the excise duty and for the grant of protection to the industry against foreign competition. In 1925, there was an acute crisis in these mills and having failed in their attempts to get the excise duty abolished and protection granted to them they notified a cut of 11½% in wages. This plunged them into a widespread strike of the labourers. This strike following closely the strike of 1924 led the Bombay Governor to support the mill-owners' demand for the abolition of the excise and the Assembly once more passed a resolution for the suspension of the excise in the critical state of the cotton industry. Thereupon the Government of India suspended it in 1925 and repealed it from the financial year 1926-27. The Assembly resolution also proposed the appointment of a Tariff Board to examine the case for protection to the industry.

But the suspension and abolition of the excise duty did not prove a sufficient relief to the industry and in 1926 on its application the Government appointed a Tariff Board in June 1926 to advise them on the cotton industry with special reference to the industry in Bombay and Ahmedabad. *Inter alia* the suggestions for internal economy and improvements in organisation and marketing and in the conditions of labour, the Board proposed an increase in the import duty from 11 to 15 per cent, grant of bounty on the spinning of higher counts of.

yarn to safeguard the handloom industry, abolition of import duty on machinery and cotton mill stores, appointment of Trade Commissioners at Basra and Mombasa, the giving of financial aid by the Government to a combined bleaching, dyeing and printing plant, and appointment of a Trade Mission for exploring new markets and the providing of a portion of the expenditure incurred by the Mill-owners' Association for maintaining its own representatives in foreign countries by the Government. The Government removed the import duty on machinery and mill stores permanently but they rejected the bounty scheme and the import duty on piece-goods. This raised a storm of protest from the industry whose representatives waited on the Viceroy and ultimately the Government announced on August 16, 1927 their admission of the claim for protection to the industry and promised to bring before the Legislature a bill upto 31st March 1930 for further protection. In the meantime in 1927, the 5% *ad valorem* duty on yarn was changed to 5% *ad valorem* or 1½ anna per lb. whichever was higher and extended it upto 31st March 1930. The duty on artificial silk was reduced from 15% to 7½% to help the handloom industry and diversify the mill production. The Trade Mission was also appointed and it urged the mill-owners to form a powerful export selling organisation to deal with the export trade in yarn and piece goods and proposed the appointment of three Trade Commissioners at Alexandria, Mombasa and Durban. In 1930-31 six Trade Commissioners were appointed at Hamburg, Milan, New York, Durban, Mombasa and Alexandria. It had been expected that the protection so far granted would give special protection to yarn of counts 31s to 40s in which the Japanese competition was the most severe. But this proved to be inadequate and the competition from Japan was intensified. The strikes in the industry in Bombay disturbed industrial peace, the depression deepened with the emergence of the world depression and in 1929 Mr. G. S. Hardy was appointed to find out the extent and severity of foreign competition especially from Japan. His report showed great increase in the Japanese

imports and confirmed the allegations of the mill-owners against Japan. The progress of the Japanese imports since the report of the Tariff Board had been rapid and uninterrupted. The Government was therefore pressed again to grant protection and accordingly the Cotton Textile Industry Protection Act was passed in 1930 which raised the *ad valorem* duty from 11 to 15% to afford adequate protection against Japan till March 1933. A minimum duty of $3\frac{1}{2}$ annas per lb was also levied on plain grey goods to help Bombay in its financial and technical organisation of the industry. A special duty of 5% on non-British goods was also imposed and thus imperial preference was introduced through the back door. Thus, a duty of 15% on British and of 20% on non-British piece-goods was imposed with a minimum specific duty of $3\frac{1}{2}$ annas per lb, but in spite of this 5% preference the Lancashire imports did not show a considerable increase. Further protection was granted in March and October to meet the revenue needs of the Government during the depression: a 5% *ad valorem* on imports of piece-goods and a surcharge of 25% on all import duties. As a result the general duty on piece-goods was 25% *ad valorem* or $4\frac{3}{8}$ annas whichever was higher on British goods and $31\frac{1}{4}\%$ or $4\frac{3}{8}$ annas per lb whichever was higher on non-British goods. On other goods the *ad valorem* duties prevailed. On imported silk goods the duty was 40%. But on imported machinery a duty of 10 per cent was levied as also an import duty of $\frac{1}{2}$ anna per lb on raw cotton. These two levies handicapped the development of the industry.

But in spite of these protective duties the imports from Japan continued to rise and depress the prices of cloth in India and on a further appeal from the industry the Government asked the Tariff Board in 1932 to investigate the question. The Board found that the depreciation of the Japanese currency had led to a considerable increase in the imports of piece-goods from Japan and reduced the prices and recommended that the duty on non-British goods be raised from $31\frac{1}{4}\%$ to 50 per cent *ad valorem* and the specific duty on grey goods of non-British origin from $4\frac{3}{8}$ to $5\frac{1}{4}$ annas per lb. On 30th August 1932 these

recommendations were given effect to by the Government. But Japanese dumping still continued and to counteract it the Government denounced the Indo-Japanese Convention of 1904 which prevented them from charging safeguarding duties under the safeguarding of Industries Act 1933 on Japanese goods alone and enhanced the duty to 75 per cent *ad valorem* and $6\frac{3}{4}$ annas per lb from 7th June 1933. In the meantime the operation of the duties of 1930 was extended first to Oct. 1933 and then to 30th April 1934 pending the conclusion of the Indo-Japanese negotiations for a new Trade Agreement. The Tariff Board recommended the grant of substantive protection to the textile industry.

The decision of the Government to denounce the Indo-Japanese Convention of 1904 led to a boycott movement in Japan to stop the taking of Indian cotton but by the time that an agreement could be reached between the Japanese spinners and the dealers in cotton the Government had increased the duty to 75 per cent *ad valorem* and to $6\frac{1}{4}$ annas per lb in June 1933. Thereupon a Japanese delegation came to India and after negotiations for three months an Agreement was reached between the two parties and the Japanese boycott was withdrawn and from 8th January 1934 the duty was decreased from 75 to 50 per cent. A Commercial Treaty was signed in London on 12 July 1934 which while recognising the right of either party to impose or modify the special customs duties to counteract the effects of depreciation in the yen or the rupee on imports from each other and according mutual most-favoured-nation treatment and negotiations, provided, under the Protocol that the customs duties on Japanese cotton goods would be 50% *ad valorem* or $5\frac{1}{4}$ annas per lb whichever is higher on plain greys and 50% *ad valorem* on others and fixed a quota for raw cotton to be purchased by Japan from India and the quantity of cloth to be purchased from Japan by India in one year. The quota of import of cotton piece-goods allowed to Japan in Indian markets was fixed at 325 m. yds. annually provided she purchased from India 1 m. bales of raw cotton every year. The

maximum quota allowed to Japan was fixed at 400 m. yds. a year, the excess over the basic quota of 325 m. yds. to increase by $1\frac{1}{2}$ m. yds. for every 10,000 bales of the excess over 1 m. bales. The quota was exclusive of re-exports of either cloth or cotton. The different kinds of piece-goods were allotted the following percentages: Plain greys 45% Bordered greys 13%, Bleached white 8% and Coloured 34%.

In the meantime an Agreement was signed on 8th October 1933 between the representatives of the Bombay Mill-owners' Association and the Lancashire Textile Mission known as the Mody-Lees Pact. The Agreement provided for the reduction of duties on British goods if Lancashire made efforts to consume Indian cotton more and more and assisted the Indian textile industry in developing overseas markets. Lancashire agreed to reasonable protection against British yarn and piece-goods being accorded to the Indian textile industry in exchange for a lower duty on Lancashire yarns and piece-goods imported into India.

The Indian Tariff (Textile Protection) Amendment Act was therefore passed on 26th April 1934 embodying the terms and conditions of these two Agreements. It was to remain in force till March 1939 and it fixed the rate of duty on non-British piece-goods at 50% *ad valorem* and specific duty at $5\frac{1}{2}$ annas per lb. on plain greys. As the Bombay Lancashire Agreement was to expire after two years of its commencement in 1933, a special Tariff Board was appointed in 1935 (10th September) to review the import duty on British goods and to make recommendations to protect the Indian cotton goods against Lancashire competition. The Board heard the evidence of the Lancashire deputation as well and recommended that the duty on plain grey goods be reduced from 25% or $4\frac{3}{8}$ annas per lb. whichever was greater to 20% or $3\frac{1}{2}$ annas per lb. whichever was higher; that the duty on bordered grey, bleached and coloured other than printed goods should be reduced to 20% *ad valorem* and the duty on yarn be retained at the old figure. With the

publication of the report the Government announced their decision to immediately reduce from 25th June 1936 the rates of duties on the Lancashire piece-goods without consulting the Legislature. The report caused a good deal of dissatisfaction to both the Lancashire and Indian industries but the Government defended their action. The duties on non-British goods remained at the old rate of 50% *ad valorem*. Under the Indo-British Trade Agreement of 9th January 1935 the United Kingdom Government undertook to take further steps to stimulate the use of Indian cotton in all possible ways including research, commercial investigation, market liaison, and industrial propaganda. Further His Majesty's Government undertook to invite the Colonial and other Empire Governments to accord a favourable treatment to Indian cotton goods like those of the Lancashire and the Indian Government undertook to lower the duty on Lancashire goods. In spite of these concessions to Lancashire, however, the imports from its mills did not improve and were only 343 m. yds. in 1937-38 as compared to 1,500 m. yds. in 1927-28. Accordingly another deputation from Lancashire entered into negotiations with the Indian representatives at Simla for increasing the sale of Lancashire goods in India and for the institution of a sliding scale of duties ranging from $17\frac{1}{2}$ to $7\frac{1}{2}$ per cent. But the negotiations proved abortive. In 1937 in the meantime a new Indo-Japanese Agreement was concluded according to which the annual basic quota of Japan was reduced to 283 m. yds. against the Japanese purchase of 1 m. bales of cotton and the maximum limit of imports of cotton piece-goods was reduced to 358 m. yds. on the condition that Japan took $1\frac{1}{2}$ m. bales of cotton annually. This quota excludes the imports of which have been limited to 8,950,000 yds. annually and the maximum duty on cotton fents has been fixed at 35%.

Under the Indo-British Trade Agreement of 1939 the preference to the Lancashire piece-goods has been linked up with the off-take of Indian cotton by the United Kingdom on a reciprocal graduated scale. Britain has undertaken to make

efforts to stimulate the consumption of Indian cotton in Lancashire mills and India has undertaken to reduce the duty on British manufactures. The basic rates of the duties are $17\frac{1}{2}\%$ on printed goods, 15% or $2\frac{5}{8}$ annas per lb. on grey goods and 15% on other cotton goods. The duties shall be reduced by $2\frac{1}{2}\%$ *ad valorem* if the imports of cotton piecegoods from Britain are not more than 350 m. yds. till they reach 425 m. yds. and the duties shall be reduced if imports increase to 500 m. yds. till they come down to 425 m. yds. The maximum yardage figure is 500 m. yds. Duty can also be increased if imports of Indian raw cotton into England fall below 400 000 bales in 1939 or 1940 and below 450,000 bales in any other cotton year. If the imports go over 750,000 bales the duty shall be reduced. With effect from 17th April 1940, finding that the total imports from Lancashire in the year 1939-40 did not exceed 30 m. yds., the Government of India reduced the duties on grey piece-goods from Lancashire excluding bordered shadars, dhoties, saris and scarfs to $12\frac{1}{2}\%$ *ad valorem* or $2\frac{3}{11}$ annas per lb. whichever was higher: on printed fabrics of British manufacture to 15% *ad valorem*; on printed piece-goods and printed fabrics not otherwise specified of British manufacture $12\frac{1}{2}\%$ *ad valorem* and on other fabrics of British manufacture $12\frac{1}{2}\%$ *ad valorem*.

Sugar Industry

India is the original home of sugar-cane and possesses half the world acreage which has increased to a very great extent in recent years so much so that in 1940-41 no less than $3\frac{1}{2}$ million acres have been under sugarcane. India is now the largest producer of sugar but till lately she has been importing sugar (white) very heavily from Mauritius, Java, and Cuba. The Indian Sugarcane is thinner, contains lesser sucrose percentage and the yield per acre is $\frac{1}{4}$ of Cuba, and Hawaii. But with the increased production during recent years not only the area under sugarcane has increased but also the area under improved varieties of cane has shown a remarkable increase. The researches at the Imperial Research Institute at Coimbatore and at

the provincial cane breeding stations and cross-breeding of the sugarcane plants have resulted in the evolution of a number of improved varieties taller, thicker and containing greater sucrose. From a heavy importer of sugar India has since 1930-31 become self-sufficient in its sugar supply and has built up "a thriving sugar industry" under the shelter of a protective duty in a period of world-wide Economic Depression. In fact the development of the sugar industry in the third decade of the present century has been nothing short of a romance. In 1929-30 no less than 940 thousand tons of sugar were imported from outside but since 1931-32 there has been a sharp fall in the imports of sugar and in 1936-37 only 23,000 tons were imported and it has been estimated by the Director of the Imperial Sugar Technology that by 1942 India shall not only become fully self-sufficient as regards her sugar needs but would also leave a surplus for export. The number of central sugar factories which were only 29 in 1929-30 and produced 89,000 tons have now increased to 146 the majority of which are situated in U. P. and Bihar. Besides this there are 9 gur refineries and their production is in the neighbourhood of 1 lakh tons. What are the causes of this phenomenal development of the sugar industry in India?

Firstly, it has been pointed out that the chief cause of this exuberance is the *grant of protection* to the industry in 1931-32. It is true that had it not been for the protective tariff, the development of the sugar industry would not have been so rapid on account of unfair foreign competition from Java and Cuba. But besides this tariff there have been equally important causes for the astounding growth of the industry.

Secondly, in a period of economic depression prices of materials and machineries have been every low and they have contributed in no mean manner to the expansion of the industry.

Thirdly, there has been a low price of land, improved facilities for irrigation in the form of canals and tube wells and the development of Hydro-Electric Power.

Fourthly, great improvements have been effected in the quality of sugarcane through the efforts of the Imperial Sugar Institute and the Provincial Departments of Agriculture as a result of which the sucrose content has increased and therefore there has been an increase in sugar recovery from 9 to 9.4 per cent and therefore the industry has been able to produce a larger quantity of white sugar.

Fifthly, important cause of its development has been the prevalence of low rates of interest for capital throughout the last decade.

Sixthly, the industry has a further advantage of being localised in the heart of the sugar belt of the country which also abounds in cheap labour, and is honey-combed with a network of railways and roads for the transport of the materials and the distribution of the finished products.

The result is that the sugar industry to-day is the second largest organised industry of the country and is *par Excellence a National Enterprise in every sense of the term.*

During the 17th and 18th centuries India exported sugar manufactured from gur to foreign countries but during the 19th century she began to import it. During the nineties the sugar industry was in a very bad condition due to enormous increase in imports from Mauritius and Java. Bounty-led beet sugar after losing its market in America due to tariff depressed prices very low and made sugar refining very unprofitable. Between 1875-1900 no less than 180 refineries were closed down in U. P. alone and even a countervailing duty did not help the industry. The fall in prices due to foreign competition caused a shrinkage in area under sugar cane. Other causes of the decline of the industry were small unit of production, crude and wasteful methods, lack of use of machinery, manufacture of sugar from gur and the refusal of the Government to allow the extraction of rum from molasses. In spite of the largest area under cane in the world India imported no less than 899,370 tons in 1913-14

because the average yield per acre was so low and the demand for sugar from a largely vegetarian population was so heavy. The area under sugar in that year was only 2,536,500 acres i. e. less by 8 % than the acreage in 1890-91. During the war of 1914-18 large purchases by U. K., apprehended shortage in foreign supplies, and rise in prices stimulated cane cultivation which in 1918-19 was 2,501,000 acres. In the post-war period the fall in sugar prices in spite of increased duties aggravated the difficulties of the industry.

Tariff & Sugar Industry

Upto the grant of protection in 1931-32 the condition of refined sugar industry was extremely deplorable. This was due to unbridled foreign competition, low *sucrose contents*, low yield and poor quality of sugar-cane, poor yield of molasses, inefficient and wasteful methods of extracting juice, the difficulty of getting large supplies of cane near the factories, and heavy capital outlays. A small revenue duty of 5 percent had been imposed on imported sugar since 1894. During the stress of the Great-War for increased revenue the duty was raised to 10% in 1916 to 15% in 1921 and 25 % in 1922. *In 1925 this ad valorem duty was converted into a specific one when the rate was Rs. 4-8 per Cwt.* This remained in force till 1930 ; *when the duty was raised to Rs. 6/- per cwt. and continued at that figure till 1931 when the duty was raised again to Rs. 7-4 as. per Cwt.* Assuming that the average wholesale price of Java sugar in Calcutta in 1925 was Rs 14 per Cwt. which is equivalent to Rs 8-8 as. per Cwt. C.I.F, *the specific duty of Rs. 4-8 as. acted as an ad valorem duty of 50 percent, that between 1930-31 at 120 percent and that in 1931 190 %.*¹⁹ These increasing duties on imports of sugar into India were undertaken to provide additional revenue during the war and the post-war period. *The imports of sugar amounted to 10,12,000 tons valued at 15.77 crores in 1929-30.* The

19. H. L. Dey : *op. cit.* p. 238-39

competition from outside before the war had led to an appreciable decline in acreage under sugarcane and in spite of some gains during the war due to rise in prices the average for 10 years up to 1930-31 was not more than 28,40,000 acres. The bounty-fed sugar from Germany and Austria also competed with the Indian sugar.

Ever since 1901 the Government had been taking an active interest, short of a protective tariff, in the development of white sugar industry in the country. With a view to improve the quality of sugar an *Imperial Sugar Cane-Breeding Station was started at Coimbatore in 1901* which since that time had carried on many successful experiments in evolving improved quality of sugarcane. *In 1919-20 a Sugar Committee was appointed for the organisation and development of sugar industry.* Since 1929 the *Imperial Council of Agricultural Research* has encouraged the development of white sugar industry. But it was not till 1929-30 that the Government adopted a definite policy on the suggestion of the Imperial Council of Agricultural Research of encouraging the establishment of sugar factories by means of protective tariff. The Tariff Board examined in detail the case of the sugar industry and reported that *it satisfied all the canons of discriminating protection laid down by the Fiscal Commission.* It recommended therefore that the revenue duty should be converted into a *Protective one* for 15 years. The Government of India to meet the budgetary deficit caused by the world slump increased the revenue duty from Rs. 6/- per Cwt. to Rs. 7/4/- per Cwt. without making it a protective duty. There after the sugar Industry Protection Act of 1932 was passed which imposed a protective duty of Rs. 7—4 as. per Cwt. till 31st March 1938 with a provision to increase it in case of necessity. The Tariff Board had recommended a duty of Rs. 7—4 as. per Cwt. for 7 years and that of Rs. 6—4 as. per Cwt. for further 8 years. As a result of this protection the sugar industry made an astounding progress. But, unfortunately to meet revenue deficits caused by a reduction of sugar imports and to

check a rapid growth of the industry an Excise Duty was imposed from April 1934. Upto March 1934 the total import duty amounted in reality to Rs. 9—1 as. per Cwt. because the 25% surcharge imposed in September 1931 (Rs. 1—13 as. per Cwt.) was still operative. The Excise was imposed at the rate of 10 as. per Cwt. on Khandsari and Rs. 1/5/- per Cwt. on all other sugar except Palmyra produced by any factory in British India. At the same time the import duty was increased to Rs. 7—12 as. per Cwt. but the surcharge was reduced to Rs. 1/5/- i. e., equal to the new Excise duty. From February 1937 the duty was reduced to Rs. 7/4/- and a surcharge of Rs. 2/- per Cwt. equivalent to the Excise Duty of Rs. 2/- per Cwt. on internal production was imposed from the same date. The total duty therefore was raised to Rs. 9/4/- per Cwt. Then on the recommendations of the Tariff Board in 1939 the Tariff Duty was revised and was reduced to Rs. 8/12/- per Cwt. but raised subsequently to Rs. 9/12/- from 1st March 1940 because of an increase in the excise duty from Rs. 2/- to Rs. 3/-. From March 1941 the duty is to be revised again to determine the extent of protection till 1946. It is very doubtful however if the Government will appoint any Tariff Board to examine the question on account of the disturbed political situation and the present war. Moreover an amount equal to 1 anna per Cwt. representing about 7 lakhs was set aside for development of co-operative cane societies to secure fair prices to the growers and an annual grant of Rs. 10 lakhs was to be given to the I. C. A. R. for research and help to both gur and sugar. From 1st March 1939 the excise on khandsari was reduced to -/8/- per Cwt. from Rs. 1/- (1937). The existing protective duty on sugar is to continue for another year.

The progress of the industry is clear from the following figures.....

Number of factories increased from 31 in 1930-31 to 137 in 1936-37. In 1939-40 there were 143 sugar factories besides 9 refineries. Production of sugar has increased from

99,088 tons in 1928-29 to 12,30,900 tons in 1936-37 and to 13.5 lakh tons in 1939-40.

Sugar is produced either direct from cane or it is refined from gur. Besides white sugar a vast quantity of gur and khandeeri or 'Bel' sugar is also produced. The Congress Government introduced a gur Development scheme in 1937-38 in 2000 villages of U. P. and next season it was extended to 4,500 villages. During 1939-40 the scheme operated in 47 districts covering 6,424 villages. The scheme comprises introduction of improved methods, marketing, research, experiments, propaganda and publicity.

The Crisis in the Sugar Industry

The sugar industry at present is one of the greatest national assets of the country. *With an investment of a capital of Rs. 30 crores, employing one and a half lakh of workers, and engaging 20 million cultivators in the two provinces of U. P. and Bihar it is the second largest organised industry in the land. It has also provided employment to 3,000 graduates in science, engineering, arts and commerce.* But it is very deplorable that *the industry is faced today with a grave crisis.* The present crisis, however, is not the first to the industry. It experienced a similar crisis in the year 1937 when the acreage under sugarcane in the 1936-37 season in expectation of continued rise in sugar prices reached the record figure of about 4.5 m. acres and the production of sugar was 12,30,900 tons i. e., a little over the estimated consumption of about 11,50,000 tons. This overproduction caused a precipitate fall in price of sugar and to avoid unbridled internal competition, over-production and consequent depression of profits the Sugar Syndicate was formed and the Sugar Control Acts were passed. The economic equilibrium of the country depends on a correct solution of the problems of the sugar industry and specially the economic prosperity of the two provinces of U. P. and Bihar on account of this crisis is hanging in the balance. A failure to solve the crisis will bring millions of cultivators in these provinces to the brink of ruin

specially because in Bihar and the eastern districts of U. P. sugarcane is cultivated not for the manufacture of khandsari or gur but for the white factory sugar.

During 1939-40 there was 13 and a half lakh tons of sugar produced and high prices of sugar due to high price of cane fixed by Government together with excise and cess and the outbreak of the war led to over-stocking and over-production and to a lessened demand for consumption. The main problems of the industry at present are: (a) over-production and over-stocks which have been estimated at the stupendous figure of 1,25,00,000 maunds; (b) the bumper cane crop of the current season and the consequent precipitous fall in cane prices compelling the cultivators to burn the standing crop rather than sell it at an extremely unremunerative price and (c) the Sugar Syndicate and its monopolistic control over the sales price. The reduced cultivation of cane in the years following the crisis of 1937 and the higher prices led to the cultivation of more cane in 1939-40 when the acreage was 3.73 millions. But in spite of increased production the price of sugar was kept very high by the Syndicate and the maintenance of high basic and selling prices of sugar led the Congress Governments in U. P. and Bihar to fix high prices of cane. This decreased the demand and led to over-stocking. The only way out of this entanglement is a ban on imports of foreign sugar; an export market for the surplus abroad by removing the ban on exports by sea except to Burma imposed under the International Sugar Convention of 1937, for 5 years.

The claims of the industry for special treatment are based on solid facts of yeoman service, namely, saving India of an annual drain of about 16 crores of rupees; payment of about 15½ crores to the cane growers; increased railway earnings to the tune of 2½ crores of rupees, and of providing an income of about 7 crores to the Governments: Central and Provincial. The industry is also suffering at present from a number of burdens like cane cess of 6 pies per maund, excess profit duty, increased

railway freight by two annas in the rupee causing a burden of 30 lakhs annually, an increased excise duty which since March 1940 is Rs. 3 per cwt.

The two suggestions contained in the above statement to solve the sugar crisis have been made by the sugar Syndicate. It would appear from the case of the Syndicate that the main trouble with the industry at present is the ban on overseas exports. According to them the total output of the sugar industry is much in excess of the local annual consumption of the country. The average annual per capita consumption of sugar in India is much less than that of a small country like Denmark (17.3 lbs. per capita in Denmark and 6.51 lbs. per capita in India.) The per capita consumption in Japan is 25 lbs. and over 100 lbs. in Great Britain and Australia. India consumes over 3 times as much gur as sugar the per capita annual consumption of gur being 25 lbs. With the increase in production of sugar, consumption has not shown any significant increase. But this contention of the Syndicate has not been accepted by the Government. It is the Syndicate which is blamed for the present crisis. *By sticking to high price it facilitated accumulation of stock by depressing consumption.* The stock market was therefore dislocated and in the beginning of February 1940 the War fever in prices had abated and the market was glutted. It was this huge surplus of existing stock with which the factories were stacked and the demand for sugar was practically nil in anticipation of the price coming down to release the heavy stocks. But the Syndicate did not see its way to lower the price of sugar and hence its profit-seeking instinct is held responsible for the present crisis. *By fixing basic minimum selling prices for sugar at an inordinately high figure in face of gross overproduction the Syndicate prevented the free play of demand and supply.* On the other hand, the Syndicate argued that the high price of sugar was only a result of higher minimum price of cane fixed by the two Provincial Governments of U. P. and Bihar in order that the cane-grower

might be benefited. Secondly, the present war started in September 1939 which had made the cost of production very high. But the argument seems to be fallacious because the minimum cane price was fixed by the Governments on a sliding scale with reference to fortnightly average price of sugar in the previous month. It was therefore the high price of sugar which was responsible for higher minimum price of cane rather than the minimum price of cane which was responsible for the higher price of sugar. If the factories were to reduce their basic selling prices of sugar the minimum price of sugar cane would have been automatically reduced. Moreover, the sliding scale introduced by the Congress Governments in the two provinces, and which came into force just after they had left office, was based on the recommendations of the Mehta Committee of 1938 which contained representatives of both the growers and the manufacturers.

Then again the Syndicate has blamed the governments for their interference with the industry and consequently for the crisis. It must be remembered that *the phenomenal development of the sugar industry during the last decade has been in no small measure due to a policy of protection and had it been left to private enterprise there would have been no sugar industry in India*. Moreover, the Tariff Board granted protection to the industry on the express condition that the interests of the cane-growers would be protected and behind the shelter of protective tariff they would not be exploited by the manufacturers. It was only in 1934 that, on finding that the cane-grower would not get a legitimate share in the profits of the industry, the Central Government authorised the Provincial Governments to prescribe minimum prices of gate cane in a sincere effort to secure a fair distribution of the profits between the growers and the manufacturers.

Lastly, as to the ban on sugar export by sea except to Burma, it is notoriously true that the cost of production of sugar in Indian factories is much higher than the cost of production of sugar in Java, Cuba etc., and that therefore Indian sugar cannot

compete favourably with the non-Indian sugar in foreign markets. Recently the Government of India successfully negotiated with the United Kingdom Government for the purchase of thousands of tons of Indian sugar but the effort failed on account of higher cost and poor quality. Hence it cannot be held that the present crisis is the result of international Sugar Convention of 1937 enforced in 1939-40 ²⁰ by the Government of India.

What is then the real cause of the crisis? The causes are two: namely, inordinately high prices of sugar maintained by the Syndicate and over-production of Sugarcane in the last season and the current one. The U. P. Government has recently issued warning to the cane-growers to cut down the cultivation but this cannot help the cane already standing in the fields. The crisis is not new to the sugar industry. In fact the industry has so far passed through a severe ordeal of crises the most important of which was that of 1936-37, when the acreage under cane reached the record figure of 4.5 m. and this was due to the higher price of cane in the preceding season. It was followed by over-production and slump and consequently the area was curtailed in 1937-38 and the crop of 1938-39 suffered from red rot and wilt. This reduced the acreage and consequently reduced production caused prices to rise again. The present war starting in September, 1939 led people to believe that prices would continue high and hence the increased acreage under cane last year and this year as well. Therefore, we conclude that the real cause of the crisis is bumper cane cultivation which has been aggravated by the foolish policy of the Syndicate of maintaining a very high price and not allowing the members to sell at a lower price.

The Sugar Tariff Board of 1937 observed in its report "In our opinion the time has come for the rationalisation of the industry under some form of State control. In earlier chapters we have indicated that the fixation of a minimum price of cane

involves the regulation of cane production, and ultimately of sugar production. The 'Nivas' organisation in Java or the Sugar Corporation of Great Britain may serve as models, but they will require modification to suit the peculiar conditions of India. Organisation must be on an all-India basis, since almost all provinces and many Indian states are concerned. We therefore, recommend that an all-India Conference be convened at as early a date as practicable in which all interests should be represented." When the sugar industry was faced with the present crisis then after two years of this weighty recommendation of the Board the Government convened the Conference at Simla in June 1940 in which the Commerce Member stressed the two aspects of the difficulty of the industry viz. the disposal of the surplus stocks and the responsibilities of the Government to the many interests involved in a protected industry. Three specific issues were placed before the Conference and discussed by it. The first issue related to the principle to be adopted in fixing the price of cane by the Provincial governments. The Conference on the whole did not favour the present sliding scale and suggested the fixing of fair price for cane on the basis adopted in the Tariff Board report with the addition, if necessary, of a bonus to sugarcane cultivator at the end of the season on the results of sugar prices. The Second related to the desirability of empowering the Sugar Control Board to which membership was compulsory in U. P. and Bihar, to fix a minimum price for the sale of sugar and to a ban on the release of sugar if necessary. It was urged upon the provincial governments to re-examine the constitution and functions of the Board to avoid the exercise of such monopolistic power by a combine like the Sugar Syndicate. The Third issue related to the advisability of setting up a central sugar committee as an advisory body representing the provincial and state governments concerned with the industry. The Conference agreed to it.

In the meantime Mr. Birla resigned from the chairmanship of the Sugar Syndicate and averred that "in creating such a body for maintaining an unreasonably high price of sugar, we

were pursuing a policy which in the long run would do incalculable harm to the best interests of the industry." He suggested two ways: one to restrict the production and, the other, which he favoured, to reduce the prices of cane and sugar to dispose of surplus stocks. He feared that if some steps were not taken to avert the crisis the Sugar industry in U. P. and Bihar would survive only for 3 years. But a monopolistic combine was not expected to lower the price of sugar and the only remedy was state control.

Government Measures :—Thereupon the Government withdrew the recognition of the Sugar Syndicate in June last rescinding rule 11 (2) (a) of the Sugar Factories Control Rules, U. P. which made it necessary for a cane-crushing factory to become a member of the Syndicate. The main ground advanced for this action was that the Syndicate had kept up sugar prices at an artificially high level which, besides adversely affecting the consumer had resulted in a large accumulation of stocks. In the meantime the Government had reduced the minimum price of cane against the wishes of the cane-growers' representatives. But it was feared that the withdrawal of recognition was not the right step nor an adequate remedy for solving the problem of over-stocking of sugar and the bumper cane crop of the year. Such decontrol would cause unhealthy competition. There was over a crore of maunds of accumulated stock which together with the sugar manufactures of the season must be disposed of and a reasonable and good price to the cane-grower should be paid. Hence the non-official suggestion was to accord freedom to all factories to crush cane whether they were members of the Syndicate or not and the Central Government was urged to forego the excise duty to enable the surplus stocks to be released at reduced prices. In the existing state of the industry a certain amount of carry-over was essential.

After negotiations between the representatives of the Governments, the Syndicate, and the Imperial Bank, the Governments of U. P. and Bihar agreed to restore statutory recognition

to the Syndicate in August last. This was done with a view to allow the movement of sugar and establish a market for it with reduced prices so that over-stocking might be relieved and cane might be crushed at full capacity during the next season and the cane-growers might get maximum relief. Surplus stock which could not be sold at the minimum economic price might be carried over to 1941-42 and the production that year might be regulated according to the demand by regulating cultivation in time. To achieve these objects a marketing organisation should be set up under the full control of the government in respect of its policy regarding price quota and production so that it might not lapse into a monopolistic organisation. The Syndicate agreed to work on these lines and hence it was recognised again on the conditions :— that it would be a selling organisation only for the purpose of regulating sale within the limits of prices and quotas fixed by the Governments and would confine its activities exclusively to the marketing of sugar ; its headquarters would be at Cawnpore; its elected chairman would be subject to Government approval and its executive officer would be nominated by the two provincial Governments; and that a Sugar Commission with official chairman and members appointed by the two Governments would be set up as the final authority, subject to Government control, on all matters connected with the production and sale of sugar as well as other matters regarding cane prices and similar things which would be referred to it by these Governments provided that the syndicate would have right at all times to approach the Governments direct. The chairman and the members of the commission would be ex-officio members of the board of directors of the syndicate. The basic prices and quotas for individual mills would be fixed by the syndicate subject to the approval of the commission and all information relating to prices and quotas etc. would be confidential till it was released for publication by the commission.

These proposals were accepted by the syndicate in its meeting at Cawnpore on August 15 and in the third week of the same

month the Governments appointed the Sugar Commission with Mr. J. E. Pedley as its chairman. To enable an adequate clearance of the heavy carry-overs of unsold stocks before the next crushing season it was necessary to give some financial assistance to the industry to bring down the selling price to a level which could be related to the probable selling price of the next season's production. The two Governments, therefore, decided to assist from August 25 the industry by assuming immediate responsibility for payment to the Government of India of Re. 1 of the excise duty payable on each maund of sugar manufactured during the last season and then unsold. This subsidy was to be realised from the industry later on. Future prices of sugar were to be fixed by the commission in consultation with the Control Board but the price of the cane for the next crushing seasons was estimated at As. 4-9 a maund and it was hinted that in view of the heavy stocks and a shorter crushing season next year the price of sugar next season would be about Rs. 9 a maund. Arrangements were also to be made for 1940-41 for converting into gur, rab or khandasari a considerably greater proportion of the crop than was done in the previous seasons and a scheme for restricting areas under cane in the vicinity of factories was to be formulated for the 1941 sowing season.

In October 1940 the Sugar Commission decided that the factories in the two provinces should manufacture on a quota basis for each mill 7,20,000 tons of sugar in 1940-41 in a crushing season of 97 days and on the basis of cane price at four annas six pies per maund, besides the provincial cess of three pies per maund (instead of 6) and the special or excise repayment cess amounting to six pies per maund of cane. The Co-operative Societies' Commission was also reduced to 2 pies a maund. Factories were to apply on these conditions for crushing licences by the 15th of October under penalty of being deprived of the benefit of the recent suspension of payment of rupee one per maund in excise duty on sugar. The basic price of new sugar was fixed at Rs. 9-2-0 per maund except in port markets. This policy of

restrictive production decided upon by the Sugar Commission was criticised by the president of the Sugar Mills Association on the grounds that it would cause the carry-over at the end of the next season (November 1941) to exceed 4,00,000 tons as previously agreed between the industry and the two provincial Governments and that the production in the season 1941-42 would have to be curtailed to 5,20,000 tons to bring down the carry-over to 2,00,000 tons at the close of that season as agreed between the Governments and the industry. Such a policy would lead to an increase in manufacturing expenses, higher selling prices and loss to the growers, and the factories in U. P. and Bihar would not be able to sell their sugar competitively with factories outside the two provinces. Hence, it was suggested that if the financial crisis was to be averted then arrangements for export of sugar to United Kingdom to the extent of 2,00,000 tons immediately and a further 2,00,000 tons in 1941 should be made. This would enable the factories to crush at full length of the season and reduce their costs and the growers would be saved from immense losses on their standing crops. Unofficial opinion also suggested a balancing of the economy of the sugar factories and suffering some losses by them, wise control and regulation of the industry by the state, relief from governmental burdens, fixation of a minimum price of cane to avoid a fall, and financial help in disposal of the surplus of last year's stock by the Government.

Dr. Rajendra Prasad also criticised the scheme of the Governments, to convert cane into gur and sell it or use it as best they could on the ground that in Bihar and East U. P. the cultivators depend more or less exclusively on mills for the disposal of their cane, gur or khandasari produced in these parts being almost inappreciable. He suggested that the Government should forego the additional excise duty to enable the sale of sugar at reduced prices; they should withdraw all restrictions on the export of sugar under an old and outworn international agreement which was no longer valid, on account of the majori-

ty of the 22 countries, that were parties to it, being involved in war. They were advised to actively and energetically push the sale of surplus stock outside and to arrange for shipping accommodation. The Government only grudgingly yielded and accorded permission, hedged in by conditions, for export of a limited quantity within a limited time. He proposed that the factories should purchase the allotted amount of cane at the price fixed by the Government and pay for them and then they should crush the surplus cane without paying down cash to the cane-growers. Slips for the amount of surplus-cane bought should be given to the cultivators, accurate accounts kept for them, and payment should be made as and when the sugar was sold at rates fixed by the Government with reference to the price which sugar fetched. He also proposed the discouraging of excessive cultivation of cane to regulate the sowing in the next season to avoid a bumper harvest, and urged upon the governments to amend their rules to give effect to these suggestions.

The Government, however, went on with its policy of restricting production of white sugar and with a view to solve the problem of surplus cane it gave an impetus to gur production by making provision for grants for the supply of Kolhus. Investigation revealed that in the eastern districts of U. P. where the problem of the excess cane was more acute the kolhus were normally worked only for 10 to 12 hours a day. Therefore a widespread campaign was successfully carried on by the field staff of the Gur Development Department in collaboration with other development agencies in the rural areas to persuade the cultivators to start crushing operations early and to work their kolhus to the fullest extent of the time every day. To remove the paucity of kolhus in Gorakhpur, Basti and Gonda etc. hiring arrangements were made and a Taqavi of one lakh was sanctioned by the Government for the supply of improved kolhus and pans and for the payment of hiring charges. Big farmers were advised to instal power-crushers and financial help was promised to them by the Cane Commissioner. The gur development staff

was also considerably augmented in these districts. It is very doubtful if this will solve the problem of surplus cane. All areas are not gur making, an abnormal production of gur will depress its price very low, the farmer is too poor to hold the stock and the gur deteriorates more quickly than sugar.

On November 10, 1940 the joint conference of Sugar Mill Owners and Cane Growers at Patna resolved that the surplus cane amounting to crores of maunds should be crushed and converted into sugar, the Government undertaking to pay the mill-owners their bare out-of-pocket expenses of manufacture amounting to -/12/10 per maund and to dispose of the sugar, and the mill-owners agreeing to crush the cane on the payment of bare manufacture cost. It was pointed out that similar measures had been adopted in Egypt and Uganda for cotton and also in Australia to help the producers there. This resolution was supported by the joint meeting of the representatives of the Bihar planters Cane growers' association and the Champaran Muzaffarpur Sugar Mills Association on November 20. But the Government did not express themselves on it. Then in December, Dr. Rajendra Prasad put forward his own scheme to meet the crisis. He proposed that "the Government should withdraw their control on the sugar industry for the present session and leave it to take its own course except in the matter of fixing the minimum price of cane and providing for the necessary inspection and supervision to ensure the correct weighing and due payment of the prices to the growers. The minimum price for cane should be fixed at the factory gate at -/4/- per maund. The cane cess of nine pies per maund (3 pies ordinary cess and 6 pies excise rebate cess) should be abolished and co-operative societies' commission should be reduced to 1 pie per maund. The Government might also lay down that factories should not delay starting crushing beyond Dec. 10 and should continue crushing upto May 15 if cane is available." Working out the cost of production of a maund of sugar under the existing government arrangements and under his proposal to Rs. 8/15/5 and Rs. 7/2/1

and adding a profit of $\text{Rs. } 7/8/-$ he found that sugar would be placed in the market at $\text{Rs. } 7/10/-$ i. e. at $\text{Rs. } 1/14/-$ less than under the Government scheme. This reduced price would stimulate sales and consumption of sugar. Any surplus might be adjusted in 1941-42. On the basis of selling price of $\text{Rs. } 7/8/-$ per maund the surplus might be estimated and the programme of crushing for the next season tentatively be laid down. Under his scheme the total of sugar production would be 10,00,000 tons instead of 7,20,000 tons under the Government scheme and the factories in U. P. and Bihar would be on equal footing with the uncontrolled mills of other provinces for competition in selling their stocks. The Government would not be a loser by foregoing 1.5 crores which the Central Government had advanced as a loan to the provincial governments enabling rebate of one rupee per maund in the excise duty on sugar. Under the existing arrangement the Central Government would be able to recover this loan from the provincial governments in three years while under his scheme they would be able to recover 1.68 crores as excise duty on the extra sugar which they would not otherwise get at all. The local government would lose its cess for the current season and the co-operative societies half their commission and the cultivators (although they would get half-an-anna less per maund of cane than the Government rate) would be able to sell almost all their cane which would be better than to get six pies more per maund of cane with one-third of their production unsold. He further suggested a decrease of 2 annas in the calculated profits of the mills to increase sale and consumption and a proportionate distribution of extra profit among cultivators supplying cane if the average price of sugar at the end of the season was found to be higher than $\text{Rs. } 7/8/-$.

In their joint communique of December 21, 1940, however, both the provincial governments stuck to their restrictive policy and concluded that "in the interest of the industry, including the cane-growers it is essential that the production of sugar in the

current year's season should be restricted" and that accordingly they were allotting quotas of cane to the factories in the two provinces estimated to produce 7,20,000 tons of sugar and had fixed the basic price of new sugar as announced in their communique of October 19 at Rs. 9/2/- per maund except in port markets. They realised and deeply regretted that some hardship and loss would be suffered by cane-growers in certain reserved and assigned areas in the trans-Ghoghra Districts of U. P. and in Bihar where gur was generally not manufactured. They were, therefore, considering ways and means of providing some compensation to the growers in these areas where cane would be left uncrushed and could not otherwise be utilised. Dr. Prasad's suggestion of virtual decontrol was rejected on the grounds that it would encourage unhealthy competition in the industry and would devolve on the government a heavy financial responsibility without the guarantee of a certain solution of the problem. Likewise the proposal of unrestricted production of brown sugar or factory gur was rejected on the grounds of possible slump in sugar and gur markets competition with the cottage-grown gur and the difficulty and cost of storage and risk in experimenting with a new product. With regard to export the communique said that in last July the Syndicate received an order for exporting 2,00,000 tons of sugar to United Kingdom but sugar of the quality and in quantity required could not be sold at the price and terms fixed. The second offer could not be executed for want of shipping accommodation. Recently the Government of India have announced to purchase a large quantity of sugar for the army and the E. I. Ry. has announced reduced rates for sugar to Afghanistan and Iran.

As regards compensation to the cane-growers promised in the communique of December 21 the Government under the Sugar Factories Control Act proposed to reduce the minimum price of cane in these areas to $\frac{4}{3}$ a maund and at the same time to increase in these areas the amount of the cess under section

29 of the said Act from 9 pies to 12 pies. From the proceeds of the additional cess of three pies a fund for compensation to the growers, who normally supplied all their cane to the factories and who this year would be unable to do so, was to be constituted and an equivalent sum was to be added to it by the Government. The governments recognised that the quantum of relief might be sensibly less than the return which the grower might secure by converting his cane into gur or otherwise utilising it. The Budget figures of the U. P. Government for 1940-41 reveal that the imposition of a special additional cess of 3 pies per maund on cane delivered to the factories in the eastern districts where the cultivators will be unable to dispose of their cane, is expected to yield 6 lakhs in the current and 3 lakhs in the next year and therefore the government has contributed additional 9 lakhs for compensation. The reduction of cess from 6 to 3 pies in eastern districts only for compensation in the current year, and the compensation of 9 lakhs set aside from the surplus, has cost the province 24 lakhs in the current year and is estimated to cost 26 lakhs next year. From March 24, 1911, the minimum price of cane was fixed at $\frac{1}{4}$ a maund and cess at 3 pies a maund over and above the additional cess of 6 pies a maund even in the trans-Ghaghra districts.

These government measures to meet the crisis have not satisfied the public opinion which thinks rightly that the announcement of compensation is not only vague and unjust to tenants in free areas, who are as much entitled to relief as tenants from reserved areas, but it is also inadequate and hard on the grower. It is no compensation in fact to give with the one hand and take it with the other. For the follies of the Syndicate and mistakes of the Governments the poor cultivator is being penalised and crushed. He is on the verge of ruin and the government is accused of indifference and of throwing the loss on the tenantry. The amount of the compensation, the basis of its calculation and the mode of its distribution are still vague and indefinite.

The industry is at present in the grip of a vicious circle and finds it difficult to extricate itself out of it. To our mind the whole difficulty is due to the lack of an organised planning and rationalisation of the industry. Sugar industry is "pre-eminently meant to be controlled wholly by the State" and the weakest spot in its organisation at present is that the industry in U. P. and Bihar alone is controlled and regulated by the state while it is uncontrolled and unregulated in other provinces and states. For the sake of the industry and the various interests concerned, and even for the sake of the nation and the State, there must be an All-India control of the industry and co-operation and co-ordination between the various provinces and the states to prevent mutual and unhealthy competition. The meaningless embargo on export by sea to other countries except Burma must be lifted up as soon as possible and the industry should be saved from a collapse and ruin. The only right solution is an out and out state plan and control of the industry. But it will take a long time. Meanwhile the cane cess and excise duty should be abolished, increased railway freight should be cancelled and the Co-operative Societies' commission should be reduced to 1 pie a maund. If these suggestions are carried out the crisis would be tided over. The countryside is seething with discontent and there is commotion, confusion and unrest. Let us hope that the Government and the mill-owners will rise equal to the occasion and see to it that the situation does not get out of control.

Iron and Steel

Iron and steel together with coal mining forms the sinew of modern industrial warfare and is the foundation of the modern material civilisation of the West. It assumed importance even in England and Europe only after the Industrial Revolution, and the manufacturing of iron with modern processes is only of recent origin in our country. But the art of smelting iron or with charcoal has been known to our countrymen since time immemorial. According to Professor Wilson "the Hindus have the art of smelting iron, of welding it, and of making steel, and have had these arts from time immemorial," while casting iron

is an art that is practised in England only within few years. It was practised as an indigenous industry in several parts of the country and supplied arms and weapons, tools and decoratives of remarkably high grades. These smelting furnaces equipped with crude bellows were widely scattered throughout the country and were operated by the Agarias or Lohars with ore dug from shallow pits. The use of charcoal limited the smelting to the regions of timber forests, and the iron thus produced was forged in the vicinity. Like other indigenous industries the financing and marketing were done by the merchant. According to Ranade, "the iron industry not only supplied all local wants, but it also enabled India to export its finished products to foreign countries. The quality of the material turned out had also a world-wide fame. The famous Iron Pillar near Delhi which is at least fifteen hundred years old, indicates an amount of skill in the manufacture of wrought iron, which has been the marvel of all who have endeavoured to account for it. Mr. Ball admits that it is not many years since the production of such a pillar would have been an impossibility in the largest factories in the world, and even now, there are comparatively very few factories where such a mass of metal could be turned out. Cannons were manufactured in Assam of the largest calibre. Indian wootz or steel furnished the materials out of which Damascus blades with a world-wide reputation were made; and it paid Persian merchants in those old times to travel all the way to India to obtain these materials and export them to Asia. The Indian steel found once considerable demand for cutlery even in England. This manufacture of steel and wrought iron had reached a high perfection at least two thousand years ago." This smelting of iron by primitive and wasteful methods continued until it was routed by the power-smelted iron and steel goods introduced by the railways during the nineteenth century. According to the census of 1891 there were 110,000 persons in Chota Nagpur alone working as blacksmiths and dealers in iron. Even to this day there are a large number of small blast furnaces in the wilder parts of

the country specially in C. P. and Orissa which produce soft iron for axe-heads and ploughshares by the old and wasteful methods of consuming ore and charcoal. In 1916 in the Central Provinces about 4 500 tons of iron ore were smelted in 300 native furnaces. But this ancient iron-smelting industry could not withstand the formidable competition of the foreign supplies from large scale mechanised plants. The gradual extension of the railways and the growth of manufacturing industries led to the development of a few engineering workshops and iron foundries but these were limited by the extension in the use of machinery in the country.

Introduction of modern processes : It was not until the 19th century that sporadic attempts were made at manufacturing iron on modern lines. In 1777 Messrs. Farquhar and Motte begged permission "to bore cannon and to cast shot and shell in the district of Jherria contiguous to the coal mine of Messrs. Sumner and Heatly." They worked only for two years. Thereafter in 1808 Mr. Duncan investigated the iron resources of Madras on the order of the E. I. Co. and started a small enterprise under it; but it proved abortive. Then in 1825 Mr. Heath of the Madras Civil Service requested the Company through the Madras Government to grant him the exclusive privilege of smelting iron and producing steel for which it was said that rich ore for "producing high grade iron existed in "inexhaustible supply on the surface, near a navigable river, not far from the coast; and great abundance of fuel (charcoal) which could be procured in the immediate neighbourhood," Mr. Heath resigned from his service and in 1830 set up furnaces at Porto Novo in South Arcot. To finance him the Madras government granted Mr. Heath the contract for getting the Co's investment of cotton for three years but his supplies were rejected and the contract discontinued. He was left with a debt of Rs. 135,000 to the government which continued to make substantial advances until in 1835 the debt was Rs. 571,000. In 1833 the Porto Novo Steel and Iron Co. took over the business and establi-

shed more furnaces at Beypoor on the Malabar coast. In fact between these two places operations were carried on at five points but only these two contributed large quantities. In spite of several concessions to both the Company and Mr. Heath the enterprise proved a failure and in 1849 Heath owed Rs. 822,240 to the government without producing appreciable quantities of iron. In 1853 the East India Iron Co. was started to take over their properties with a capital of £400,000 and several concessions from the government. It erected two blast furnaces in South Arcot and Coimbatore districts. But on account of lack of capital, inexperience, lack of suitable machinery and the revolution in iron and steel production caused by the smelting of ore with coal and the production of steel by the Bessemer process, all these enterprises failed and their business languished. The last two furnaces were closed in 1858, those at Porto Novo in 1866 and at Beypoor in 1867, and in 1874 they were taken up finally by the government. The failure of these operations showed conclusively that to be successful the iron and steel works should be set up in regions where coal and iron were found in abundance in close proximity and the methods of production must be modernised.

Similar sporadic attempts were made in U. P., Bengal and Bombay and they met with a similar fate. In the Kumaon district of U. P. investigation was carried out in 1837 and furnaces were set up both by Government and private bodies but they failed on account of lack of fuel. They continued their fitful course till 1877. In Bengal Messrs. Jessop and Co. began an iron works in 1839 near Barakar but it closed down very soon. In 1855 Messrs. Mackay and Co. began the Birbhum Iron Works and produced 2 tons of pig iron a day but on account of lack of charcoal it stopped in 1860. Messrs. Burn and Co. took up the works in 1875 but gave it up. Finally on the river Nerbuda about 200 miles above its mouth the government established an iron works after investigation, but on the transfer of the official, responsible for the scheme, the

government gave it up as a measure of economy after spending $7\frac{1}{2}$ lakhs of rupees. On their failure to sell the plant the government handed over the territory and the plant to the Maharajah of Indore. Thus came to a close the fitful attempts of the government and private European firms to smelt iron with charcoal in blast furnaces.

From 1875 efforts were made to smelt iron with coal. In the Chanda district of the Central Provinces Mr. Nees was delegated by the government to experiment with an excellent quality of ore, but high percentage of ash in it was a great handicap. Then the Barakar Iron Works was started in 1875 in the Raniganj coalfield for the production of pig iron and it proved ultimately successful. In the beginning for four years on account of the poor quality of its ore and coal and the inadequacy of its original capital of Rs. 10,00,000 it produced only 20 tons per day and suffered heavy losses, and closed down in 1879. Then it was taken up by the government in 1881 and produced about 30,000 tons of pig iron between 1884 and 1889 when it was sold to the Bengal Iron and Steel Co as a going concern. It was, however, not until 1899 that the shareholders were able to get the first dividend. The Government helped the Company with an order for 10,000 tons of pig iron or castings per year for ten years at 5% less than the price of the imported goods. Slowly the works were improved and extensions made and in 1903 with a government subsidy of Rs. 23,500 a steel producing plant was installed but the manufacture of steel was unprofitable on account of the poor quality of the ores for a long time. The steel making department was closed down and its plant was a dead loss. In 1907 Mr. Watson estimated its output of pig iron at about 50,000 tons a year. In 1910 new sources of ore in the Singhbhum and Manbhum districts improved the prospects of the company.

Steel Production : — Although pig iron has been produced by the Bengal Iron and Steel Company at Kulti since 1875,

yet it was not until 1914 that the production of steel by modern processes became a practical possibility. In 1892 the Army Department had set up a metal and steel factory at Ishapore which has been producing acid steel from imported iron and its present capacity is said to be 10,000 tons of bars annually. In 1898 the East Indian Railway established at Jamalpur a factory containing two basic-lined 15-ton furnaces and three mills for rolling ingots into billets, bars and small structurals from the scraps in its various workshops and the present capacity of the factory is 6,000 tons of steel and 3000 tons of casting. But both of these enterprises did not utilise native pig-iron containing a large quantity of phosphorus and were not run on ordinary commercial principles. In 1905 the Bengal Iron and Steel Company attempted to manufacture steel from native pig-iron but it proved a failure and in six months the Company lost $5\frac{1}{2}$ lakhs and its steel plant costing $17\frac{1}{2}$ lakhs was closed down. The poor quality of the ore, low price of imported steel, orders for small quantities of numerous sections, the inferior quality of pig-iron used for steel making and the necessity of importing fire-bricks and ferro-manganese were the chief causes of this dismal failure. Later on the works were extended and remodelled and the good ores of the Iron Belt from 1910 in Singhbhum and Manbhum improved the chances of steel production. The works now produce pig-iron pipes, railway and other castings.

Mr. Tata and the discovery of the Iron Belt:—In the meantime Mr. J. N. Tata, the most celebrated industrial magnate of our country, who had already made a big fortune in his Empress Mills (cotton) at Nagpur was busy with his prospecting operations to open the now famous *Iron belt* of the country which ultimately revolutionised the iron and steel industry and made its history virtually a romance. He did more than any body else for the establishment of the Indian iron and steel industry. In the Chanda district of the C. P. where Mr. Nees was experimenting in 1875 under Government direction to smelt iron with

coal, Mr. Tata wanted to undertake iron smelting in 1885 but was refused permission by the Government. He had read the report written by R. von Schwartz, a German expert, on the prospects of iron manufacturing in the Central Provinces. This led him to a hard and prolonged enquiry as to the prospects of producing iron and steel on a large scale and on a commercially profitable basis. A large quantity of coal, obtained from the Warora coal mines, owned and operated by the Government, and to which a small railway had been built, lay near "a hill nearly $2\frac{1}{2}$ miles long by $\frac{1}{2}$ mile broad" and yielding 70% iron from the ore. But the coal with a large percentage of ash was non-coking. Mr. Tata found out two main obstacles in the way of a successful operation of the industry: the non-accessibility of good coking coal from Jharia and Ranigunge by the iron ores of the Chanda district and the antiquated and vexatious rules relating to prospecting and mining licences of the Government of India under which licences could be granted only to individuals and not to companies and so the ascertainment of the commercial possibility the Government could intervene and auction off the mining rights. Therefore, when he wanted to take over the Government coal mines at Warora together with control of the short railway his offer was rejected. In 1899 with the coming of Lord Curzon these stupid mining regulations were liberalised and Mr. Tata succeeded in interesting Lord George Hamilton, the then Secretary of State, in his project. Having obtained the official support Mr. Tata got a more comprehensive and definite idea about the commercial prospects of an iron and steel industry from the report of General R. Mahon, the superintendent of the Government Ordnance Factory, at Cossipore. It was Mr. Mahon who pointed out the existence of good coking coal in large quantities in the Behar coal mines and suggested that a place in the proximity of the coal mines and commanding large markets would be the most suitable site for iron and steel industry. He also insisted upon the most up-to-date methods and works, expert management with local experience and the

greatest economy in the collection of raw materials. Then in 1902 Mr. Tata went on an extensive tour of the the iron belts of Great Britain and United States of America, consulted iron masters and mining experts and brought out Mr. C. M. Weld, a consulting mining and metallurgical engineer, for exploration and experiment in the course of which he opened the great Iron Belt of the country between 1903-05. Mr. Tata, however, could not see the completion of his labour as he died in 1904, but his sons and successors took up the matter and carried his work to fruition.

Investigation was carried on first at Lohara in the Chanda District but insufficiency of ore and difficulty of coal led to investigation in Deogarh district which had plentiful ore but no coal. The midway place between the Bihar coal and Deogarh ore was thought of, when Mr. P. N. Bose, of the Geological Survey of India, then in the service of Mayurbhanj State, called the survey party into that state and there was found the enormous deposits of iron ore which Mr. Bose persuaded the Tatas to exploit commercially. This Iron Belt has some of the richest iron deposits of the world and although the ore supplies are not so plentiful as in many western countries yet they are adequate to sustain an iron and steel industry equal to that of Great Britain or one-fifth of the United States of America for 300 years. According to Mr. H. C. Jones on the Geological Survey the Orissa iron belt has 2,832,000,000 tons of ores possessing 60% of iron; while an American mining engineer holds that 400 miles west and 200 miles south of Calcutta there are 20,000 m. tons of high grade ore at an average distance of 125 miles from the Beogal coal areas. The ore is found at or near tops of hills rising to 2,000 to 3,000 feet above the sea level which run continuously for 40 miles and contains over 60 to 70 per cent iron. Sulphur is hardly 0.06% and phosphorus 0.08%. The iron belt 'extends from the deposits of Gurmashiboli in Mayurbhanj state westwards through the Keonjhar and Bonai areas to the subdivision of Kolhan in Singhbhum. Both in quality and quantity these hematite ores are thought to

exceed any other ores of the same kind, including the great American occurrences of Minnesota, Wisconsin and Michigan." According to Dr. C. S. Fox the hematite deposits will be sufficient for the needs of the Indian iron masters for one thousand years at the rate of $1\frac{1}{2}$ m. tons of pig-iron annually. Besides the deposits of the iron belt there are large hematite deposits in C. P., U. P., and Mysore which are not worked at present on account of prohibitive cost of fuel. Besides hematite ores there are large deposits of magnetite, laterite and clay iron-stone in Madras, Bihar. & Orissa, Assam and Bengal, but they are also not being exploited. The only defect in the otherwise remarkably rich hematite deposits is the low percentage of lime in them and this necessitates the use of large quantities of limestones as fluxes in the blast furnaces. As regards the depth, facilities for transport and mining efficiency the Indian ores compare favourably with the ores of the other countries. The material is obtained on the surface and there is no need of pumping. Sufficient quantities of limestones are to be found in the different parts of the country but the relatively richer supplies are at a great distance from the existing works. Similarly the dolomite limestones are obtainable in adequate quantities at reasonable distances from the existing works but they are of very poor quality. The supply of manganese and silicon are plentiful and large supplies of high grade iron are found in the vicinity of fairly good quality coal. However, the coal supplies are neither so abundant nor of good quality as those of iron. According to Dr. Fox the total coal resources of the country are 54,000 m. tons but only 5% of this is coking coal and about one-tenth of it lies in Assam from where its transport is very costly to the existing factories. The quantity of suitable fuel for an extensive iron and steel industry is limited. In quality also the Indian coking coal is very much inferior to the British coal and contains a high percentage of ash and phosphorus. This high percentage of phosphorus necessitates the use of more costly duplex process of conversion of pig-iron into steel. The high ash content of coal makes the percentage of

tar lower which prevents the manufacture of disinfectants and dyes by the Indian manufacturers and the ferro-manganese obtained from the native blast furnaces contains more than 0.3% of phosphorus fixed by the European makers. To smelt the 2832 m. tons of the hematite ores of the Iron Belt alone into pig iron a minimum supply of good looking coal should be 3,000 m. tons whereas the total reserves of the Bengal, Behar, Orissa and Assam amount only to 2,400 tons. The iron and steel industry also suffers from serious deficiencies in the quantity and quality of both skilled and technical labour force and unskilled labour and from the relatively high temperature of summer and autumn,

The epoch-making discovery of the iron belt in 1905 led to the formation of the famous Tata Iron and Steel Company which was floated in 1907. In the previous year the Tatas had appealed to the financial houses in London for funds but in vain. Then in 1907 when the swadeshi movement was in the ascendant a new prospectus was issued and the entire capital of £ 1,63,000 was subscribed within three weeks. With the help of a well-known firm of construction engineers from Pittsburg the construction of the plant began in 1908 and completed by 1910. The company was first established at Sakchi in the Singhbhum district in a jungle but by 1912 the site grew into the celebrated Jamshedpur, "a most up-to-date industrial city with broad and straight roads, water-works, electric lighting, residential houses and schools and clubs".²¹ It is a great cosmopolitan place and before the Great War it not only had a large labour force from all over India but also representatives of Englishmen, Americans, Germans and Austrians, Italians and Swiss and Chinese in the staff of its technical and skilled workers. The Tata Co. has now one of the biggest and finest equipped iron and steel plant in the world with extensive collieries, ores, limestone and dolomite quarries etc. It owns very rich iron ores

in Mayurbhanj, in Orissa, and Raipur in Central Provinces, manganese deposits in Balaghat in C. P., magnesite and chromite in Mysore and coal in Jharia. The various parts of the machinery and original plant were purchased from U. S. A., Germany, Belgium and England and technicians and skilled workers were imported from England, America and Germany. Before the starting of the works the Government placed a standing order for 20,000 tons of steel rails annually for ten years at import prices but the demands of the Munitions Board far exceeded this figure during the War.

In December, 1911 pig iron was produced for the first time by the Tatas and steel in 1913; the original works had a capacity of turning out 160,000 tons of pig iron and 100,000 tons of steel every year. In September 1912 a second blast furnace was blown in and in 1913-14 the output of iron was 155,383 tons and of finished steel 48,872 tons²² and between 1913 & 1915 the firm sold 106,795 tons of pig iron and 97,698 tons of steel and paid handsome dividends. The war of 1914-18 came as a great boon to the infant and pioneer because by eliminating foreign competition from the home market and by raising prices it created the most favourable conditions for the growth of the industry and by 1916 the plant was in full swing. The Government commandeered the entire output of the company and by placing heavy orders for the supply of steel requirements for the war in Palestine, Mesopotamia, East Africa and Salonica they gave it maximum encouragement. The production of ferro-manganese was stopped in 1916 to meet the increased demand for steel and extension was planned on a large scale by rushing through equipment from America, but on account of transport and other difficulties during the war and the post-war boom this extension was not completed until 1924. Under the stimulus of war demand and high prices production was multiplied and in 1916-17, according to the figures of the Tariff Board, 147,497

22. H. L. Dey: *op. cit.* p. 157.

tons of pig-iron, 139,433 tons of steel ingots, and 58,726 tons of finished steel were produced and by 1921-22 the figures were 270,270 tons, 182,107 tons and 125,871 tons^{2 3} respectively. The Company paid very heavy dividends :

1914-15	1915-16	1916-17	1917-18.
8%	15%	20%	20% (on ordinary shares)
25%	180½%	291%	291% (on deferred shares)

The Company rendered very valuable services to the Government by supplying 250,000 tons of steel rails at an average base price of Rs. 150 a ton when they could be got only from America at the cost of Rs. 200 a ton and that too at great risks and delays. Thus, the Government saved no less than Rs. 600 lakhs but the "strategic advantage of basing the campaigns in Mesopotamia and E. Africa on steel supplied by India far outweighed any money-saving, and could not be estimated in terms of money". The Capital of the Company was increased from Rs. 231,75,000 to Rs. 2,56,81,000 in 1917-18.^{2 4}

With the end of the War in November 1918 prices began their downward trend and there was a very sharp decline in the early part of 1919 and in 1918-19 the Co. paid a dividend of only 7% on the ordinary shares and no dividends on the deferred shares. But with boom that set in then the prices soared up again and reached record figures and for the next two years between 1919 and 1921 the company paid 16 per cent per annum on ordinaries and 202½ per cent per annum on the deferreds. Then came the post war depression and with the slump in prices the price of steel fell low but the cost of production increased considerably on account of higher prices of coal and substantial increases in wages. Moreover the cost rose also because of the production of better quality steel to withstand the foreign competition. After 1921 therefore the company was involved in difficulties and in 1921-22 it paid a dividend of only 4 per cent on the ordinaries and

23. *Gadgil: op. cit. p. 261*

24. *H. L. Dey: p. 161.*

nothing on the deferreds. The difficulties of the company were not due only to the high cost of coal and higher wages but also to the fact that the greater extensions planned in 1915-17 could be completed only by 1924 and not by 1921 as originally expected. Some of these extensions therefore were executed when prices were very high and freights costly. This caused over-capitalisation and the industry was permanently burdened with high depreciation and over head charges and weakened in its competitive power. Thus the inordinate delay in the completion of the extensions caused by the shortage of freight space and risks during the war and the impossibility of getting early deliveries from America due to the short post war boom landed the company in financial stress, and the post-war depression intensifying foreign competition coincided with the initial stages of the extensions. As these extensions were planned in the middle of the war to meet the increased demand for steel rails by the Government in the eastern theatres of war the Government helped the industry indirectly by arranging for the requisite shipping facilities and by relaxing the ban on the raising of capital by private individuals or firms. Satisfactory Balance Sheets and very high dividends attracted the investors and for the planned extensions the capital was raised first in 1917 to Rs. 352 lakhs and then to Rs. 1,050 lakhs by the end of 1918. The extensions included the addition of new blast and steel furnaces and rolling mills etc. In August 1919 the third blast furnace was blown in although its effects could not be felt till 1921. It increased the pig-iron capacity of the factory by 80 per cent while the addition of three open hearth furnaces between 1916 and 1922 increased the steel capacity by 27 per cent. In December 1922 another blast furnace was added and the production of steel was stimulated by the erection of two duplex furnaces and the production of sheets, plates and sheet bars and rolled steel was made possible by the addition of rolling, plate, sheet and sheet bar and billet mills.

In the meantime the phenomenal success of the Tatas led to the formation of a new company known as the Indian Iron and Steel Company in 1918 with a capital of £ 1 m. at Hirapur (formerly Burnpur) near Asansol and near an important railway junction and the coalfields of Jharia, Ranigunj and Barakar. The initial plant included two blast furnaces with a capacity of 300 tons of pig-iron or 200 tons of ferro-manganese daily and by-product recovery cokes ovens and in November 1922, the Company began to produce pig-iron, railway sleepers and railway chairs. In view of the unstable state of the steel market in the post-war period the company decided to produce only pig-iron for export and sale. The Bengal Iron Co. had also registered a continuous and steady progress during the war and afterwards and produced a large quantity of ferro-manganese and foundry iron in which it has specialised. Its pig-iron capacity is 200,000 tons a year and it now controls the Indian Iron and Steel Co., whose pig-iron capacity is 350,000 tons a year, by purchasing a majority of its shares. The United Steel Corporation of Asia established at Manoharpur in 1921 and the Eastern Iron Co., and Mysore State Iron Works at Bhadravati established in 1923 working its blast furnaces with charcoal are the other notable concerns started in recent years for the production of iron. The capacity of the Mysore state plant is 20,000 tons per annum. These are the only concerns producing iron on modern methods. The Bengal Iron, the Tata and Indian Iron and Steel Cos., and the Mysore State Iron Works produce over one million tons of pig-iron and export a large quantity to Japan, United Kingdom and United States, Germany, Italy, China and Argentine Republic.

In fact so far as pig-iron is concerned the establishment of the various iron and steel works has not only turned India into an important seat of iron and steel manufacture but also as a substantial exporter of pig-iron—a branch of the industry in which India has not only attained manhood but has achieved

a remarkable efficiency and vies with the oldest and the most important iron producing countries of the world. In the words of Mr. Perin an American mining engineer "India offers exceptional opportunities for the courageous manufacturer of iron and steel, she can produce pig-iron at figures which defy competition and she can export it to any market in the world." She has distinct advantages in the production of pig-iron and the Tariff Board found in 1924 that she "already produces pig-iron more cheaply than any other country in the world." This branch of the industry is now firmly established and besides satisfying the demands of the foundries and steel mills of the country a rising export trade in the surplus output has been established and imports have declined to negligible proportions. Even before the War exports had begun and in 1913-14 no less than 82,592 tons had been exported. During the War there was a stoppage and in 1918-19 only 9,596 tons of pig iron were exported. Thereafter the exports increased gradually in 1919-20 to 41,749 and rose to 118,545 tons in 1922-23. Even during the post-war depression the pig iron industry did not suffer much upto 1924, but thereafter for some time the exceptionally low prices and slack demand caused the Bengal Iron Co., to close their works for some time in 1925 and the Tariff Board advised the Tatas to turn as much pig-iron into steel as possible. After this short-lived depression the production increased considerably and very fast, and in 1929-30 it was 1,376,000 and exports were 569,000 tons. In 1930-31 on account of the depression and reduced exports the production declined to 1,140,000 tons; thereafter it rose again gradually and in 1936-37 it was 1,557,000 tons while exports were 574,000 tons. The exports of pig-iron were 629,000 tons in 1937-38 and only 514,000 tons in 1938-39.

With steel the story is different. There was no production of steel before the War and even the Tatas were able to produce steel on account of the government encouragement

during the war but their plant was very expensive in the beginning and only the war conditions and prices kept up the production. Steel production is still relatively more expensive than foreign supplies although great reductions in costs have been effected recently on account of better equipment and more efficient operations and of cheap material and labour. Dependence on foreign technicians and managers had been a source of great expense and weakness in the initial stages but gradually the Tatas have followed a policy of progressive Indianisation. Between 1924 and 1930 the numbers of foreign employees declined from 229 to 118. Since the War therefore the Tatas, the sole producers of steel in India, have made rapid progress and the production of steel increased from 13⁰,433 tons in 1916 to 599,565 tons in 1927-28 and that of finished steel from 92,726 to 428,654 tons. By 1936-37 the productions were 861,000 tons and 692,000 tons respectively. After the depression of 1921-23, in spite of very trying conditions, the industry had advanced through the stimulus of protection since 1924 when a fifth blast furnace was added and the capacity for pig-iron was increased to 900,000 tons a year. As a result of the greater extensions the finished steel capacity increased from 126,000 tons to 420,000 tons by 1927-28. Between 1924—27 improved methods had also been introduced and this together with the low price of coal and the extensions brought down costs. But the old plant had become obsolete and the new plant was not well-balanced. "The capacities of the coke ovens and the steel furnace proved too small, while those of the blast furnaces and the rolling mills turned out to be too large." Hence another extension scheme approved by the Tariff Board of 1927 at a cost of 270 lakhs was decided upon which was expected to increase the finished steel capacity to 600,000 tons by 1931-32 and to effect considerable economies in costs. This extension scheme comprised "enlargements to the present coke, pig-iron and steel producing capacity of the plant, and of the consequent necessary increases in handling facilities and various

improvements in the rolling mills and many other departments of the plant."

With extensions and progress there has been a marked improvement in the quantity and variety of the products. The old plant upto 1924 produced only rails, structurals, bars and fish-plates but now in addition to these plates, sheets, tin-bars and sleepers are also produced. Most of the pig-iron produced which was upto 1920 exported and sold is now converted into steel by the Company in its own steel works. Besides a large number of ancillary and by-products industries have grown up round the Tata Company at Jamshedpur. The Iron and Steel Industry comprises engineering trades like wagon-building industry, the Tin-plate industry, Wire and Wire-nail industry. Concerns for the manufactures of railway wagons and locomotives, agricultural implements, wire products, tinplates, enamelled iron-ware and cables, galvanized products, heavy chemicals, acids, fertilizers, limo, and ammonium sulphate, tea and jute mill machineries, tubes and coal tar have sprung up in the vicinity of the iron and steel plant and the Tata Co. has entered into agreements with them for the supply of steel.

In the recent world economic depression the industry was in a bad way after 1929. It was due to the very low prices of steel and to the slackening of demand from the Indian railways and labour troubles, which caused an increase of about Rs. 4 per ton. The actual railway orders in 1930-31 fell to less than half the estimated demand of the Tariff Board at 195,000 tons. As the Board has pointed out in 1927 the success of the steel industry and their scheme for its protection were based on co-operation of the railways. The fall in the railway demand therefore, made the whole business unprofitable; no substantial dividends could be earned and markets had to be sought abroad for semi-finished steel. After the Ottawa Agreement such markets were secured by agreement with British steel industry. Moreover the reduction in the demand from railways was partially made up by an increase of Rs. 20 per ton in the

contracted price of the rails and by small increases in duties on other railway materials. With the present war and re-armament programme throughout the world the steel industry has been stimulated again. The present war has made India the arsenal of the Empire and the steel production has been controlled by the Government. Last year the Tatas made 1,140,000 tons of pig-iron and 770,000 tons of steel. A large expansion programme contemplated the creation of a hoop and strip plant, a tube making plant and plant for making wheel tyre and axles. When the last is put up they would be able to manufacture all the components of locomotives in India with the exception of boiler tubes. They were going to manufacture very shortly acid steel for the first time out of Indian material by an entirely new process. This expansion scheme when completed would increase the pig-iron capacity to over $1\frac{1}{2}$ m. tons and the steel capacity to about 850 to 900 thousand tons. The Bengal Steel Corporation which began manufacturing steel in 1939 has a capacity of 200 to 250 thousand tons and between them these two companies would supply the whole demand of India for ordinary steel and have a small surplus for exports. Unfortunately the Government have not encouraged the manufacture of locomotives on the ground of lack of suitable labour and cost and materials so far. The industry suffered from prolonged labour troubles in 1938 and the output of pig-iron declined from 1,644,000 tons in 1937-38 to 1,576,000 tons in 1938-39 but that of steel ingots increased from 922,000 tons to 977,000 tons and of finished steel from 668,000 tons to 726,000 tons. It was due to the expansion of the internal market. As a result of the war steel production during 1939-40 was increased considerably. Pig-iron, steel ingots and finished steel increased by 18%, 24% and 17% respectively. The industry worked at the limit of its capacity and booked order for several months ahead. It also produced armour plates, special alloy steel sheets for helmets, steel buildings, engineering supplies and parts for weapons and ammunition.

and there was an expansion of the tool manufacturing industry.

In spite of her growing production India still imports a large quantity of steel and iron goods, a tendency which became more pronounced in the post-war period. The average annual import for the pre-war quinquennium was 808,000 tons, for the war quinquennium it was 422,000 tons, for the post-war quinquennium it was 661,000 tons and for the quinquennium ending 1929-30 it averaged 1,105,693 tons. In 1937-38 it was 3,078,000 tons and 2,165,000 tons in 1938-39.

Protection: From its very inception the industry was fortunate in being the favoured child of the people and the Government. It was regarded as an object of national pride and glory: it had a military and national importance and being an infant and basic industry it was able to advance very cogent reasons from the protectionist armoury for public help and support when in the post-war depression after 1921 it was involved in financial distress—because of low price of steel and higher wages and prices of coal. The Fiscal Commission of 1921-22 had recommended its case for governmental assistance. Therefore, when the Government of India adopted the policy of discriminating protection early in 1923 the case of the iron and steel industry was the first to be considered by a Tariff Board appointed in July 1923. The greater extensions planned by the Tatas during the war and completed by 1924-25 had led to the purchase of tools and machinery in a period of high prices and to consequent heavy capitalisation and burden of overhead charges; the initial difficulties of a pioneering concern, inexperience, inefficient labour, the necessity of importing technicians etc., from abroad, made the plant less effective and costs of production comparatively higher. With the fall in steel prices in the post-war period due to increased world productive capacity and technological improvements the disparity between the costs and prices became still more pronounced. The unsettled monetary conditions and the depreciated foreign exchanges in Europe and the

depression in world trade led to dumping of the Indian market by the old-established iron and steel industry of European countries. The Tatas had moreover exhausted their credit in the market for raising the enormous capital for the greater extensions, had not built of adequate reserves to tide over financial difficulties and were finding it difficult to meet the overhead expenses and interest on debentures and to raise more capital. Therefore they applied for protection against unfair competition and strengthened their claims for it by quoting the Fiscal Commission that the prosperity of such an important basic industry was essential for national safety and industrial development. They also recalled their yeoman services to the Government and the country during the war and applied for the increase of the existing 10% *ad valorem* duty to 33½%. The Board found that the industry was essential for defence and important as a basic industry and that without adequate protection its development might cease and production of steel stopped. The industry had natural advantages in more important of raw materials, an extensive and growing home market but suffered from a temporary handicap in skilled and technical labour. On account of wide gaps between prices and costs steel was being produced at a loss. The high costs were due to the large number of imported skilled workers and to the uneconomical old plant; and losses were also caused by the relatively low prices of rails supplied to the railways upto 1919. But with the extensions planned the costs were likely to be reduced in course of time making the production of steel at remunerative prices possible and the industry independent of protection. The burden on the consumer would be only temporary. The Board therefore recommended protection for three years on account of uncertainty of prices. The formula adopted was that the amount of protection should be equal to the margin of difference between the fair selling price of Indian steel and the price of imported steel." The protection was to take the form of specific duties in addition to the ordinary revenue duties on those kinds of imported steel

which were manufactured by the Tatas and on wrought iron; and of bounties on rails and fish-plates. The duties on fabricated steel were also to be increased to help the engineering industry.

The Steel Industry Protection Act was therefore passed in 1924 embodying these recommendations. On heavy steel rails, fish plates and wagons manufactured in India Rs. 242 lakhs of bounties were to be given between 1924 and 1927; duties on steel bars and sheets were levied at Rs. 40 and Rs. 30 per ton respectively. With the grant of bounties on railway wagons the old guarantee of purchase was withdrawn. A special duty to protect wire and wire nail industry was also levied and the tin plate industry was also protected. A 25% *ad valorem* duty was levied on fabricated steel imported as a set-off against enhanced duties on raw steel to help engineering.

Soon after this the fall of the continental exchanges and the continued depression in steel industry in the world and the consequent low price of steel led to large imports and the Board was approached to investigate afresh. It recommended offsetting duties but the Government gave special bounties for one year subject to a maximum of Rs. 50 lakhs. Again in 1925 the l. s. 6 d. ratio and continued fall in steel prices rendered the duties inoperative and to counteract this difficulty the Government agreed to give additional bounties upto a maximum of Rs. 60 lakhs for the next two years. In 1927 a second enquiry was instituted by the Tariff Board which found that improved methods, new extensions and lower coal price and replacement of alien skilled labour by Indians had led to reduced costs and improved position of the industry but it still needed protection on a smaller scale. Bounties were abandoned and the protection took the form of increased import duties for the next seven years. The Board predicted a bright future for the industry and expected that by 1933-34 the industry would be independent of protection, and said that no scheme of protection would be successful without the co-operation of the railways which were the largest consumers of steel. The Steel Industry Protection

Act of 1928 was passed to give effect to the Boards' recommendations which differentiated between British and non-British steel to secure a fair distribution of the burden on consumers and ensure stability of protection to the industry. The duties on wagons and wire and wire-nails were abolished but those on tin-plates and engineering were reduced. In 1931 on account of low price of galvanised sheets an additional duty was imposed on imported galvanised sheets in 1931 and the protection to the wire and wire nail industry was restored in 1932 and in 1934 a duty of Rs. 45 per ton on wire and wire nails was levied. Changes were also made in 1933 on account of the Ottawa Agreement and the supplementary iron and steel agreement. Preference was extended to such iron and steel goods as were not protected and to machineries which were not imported freely or were not subject to the temporary duty of 10% *ad valorem*. In other words preference was given only to machineries which were subject to 25% *ad valorem* duty. Under the Supplementary agreement import duty on galvanised sheets was adjusted as follows: Rs. 30 per ton on sheet made from Indian bar in U. K.; Rs. 53 per ton on sheet made from non-Indian bar in U. K. and 83 per ton on sheet not made in the U. K. The operation of the Act of 1927 and the Amendment Act and the Wire Protection Act of 1932 was extended to Oct. 1934 and in the meantime a fresh enquiry was made by the Board which recommended reduced scale of duties and to make up the deficit in customs revenue an excise duty of Rs. 4 per ton on steel ingots and a countervailing customs duty on steel ingots imported were to be imposed. The countervailing duty was additional to the protective duties and alternative to the *ad valorem* duties on un-protected articles. The Iron and Steel Duties Act of 1934 gave effect to these recommendations. Later on it was decided to continue the protective duties of 1934 until March 1941 and on March 24, 1941 the Assembly decided to continue the duties to March 1942, because it was not possible and useful to appoint a Tariff Board to inquire into the condition of the industry in the unsettled state of the present war.

Cement Industry

Modern cement dates back to 1824 when Joseph Aspden of Leeds in England, succeeded in making a cement with materials which he procured from separate sources, instead of those which were found already combined by nature, such as the volcanic ash used by the Romans. He obtained a patent for his process and called the product "Portland Cement," because when it hardened it resembled the widely used building stone from the Isle of Portland. Any cement manufactured on the principle discovered by J. Aspden came to be known as Portland cement.

The Indian cement industry is only of recent growth. Although India possesses suitable materials in large quantity for the manufacture of cement and provides an extensive home market for it, it was not till the outbreak of the World War of 1914-18 that the industry assumed any national importance and was successful in turning out cement to match the British standard specifications. India used to import about 180,000 tons of cement every year before the War but there was a considerable increase in the demand for cement for constructional purposes in the post-war period by railways for bridges etc. and by local bodies for the same purposes and for building houses. At present the annual consumption is about 1,000,000 tons. With the growth of ferro-concrete the use of cement is increasing very fast.

Although the South India Industrials Ltd. had been started in 1897, yet the manufacture of Portland cement commenced in India as late as 1904 in Madras. At the eve of the War this was the only cement works; none of the other three companies floated in 1912 and 1913 had actually commenced to manufacture when the War began. These three were the *Porebunder*, the *Katni* and the *Bundi cement factories*. The Indian Cement Company at Porebunder in Kathiawar began to work from October 1914; the Katni Cement and Industrial Co. Ltd. with its works at Katni in C.P. started working in January 1915, and the Bundi Portland Cement Ltd. commenced

production at Lakheri in the Bundi State (Rajputana) in 1916. As originally equipped the three plants together had an output of 76,000 tons. The war gave a fillip to the industry and the post-war boom witnessed a remarkable increase in the building industry which reacted very favourably on the cement industry. India has plentiful supplies of excellent limestone well distributed all over the country and the prosperity of the war and post-war years led to a phenomenal increase in the industry. It was patronised by the Government who purchased the bulk of the output and controlled the industry in the later part of the war till 1919.

Immediately after the war followed the boom years of 1919 and 1920 and the prospects of industrial expansion seemed unlimited, and every week saw fresh flotations. There also began a wide speculation in cement and from 1919 to 1922 no less than 7 new companies were registered. The cement factories were now earning very large profits and the future of the industry seemed assured. The three older companies doubled their output and six new companies began operations by 1923. Two of the new factories were erected near Katni, one in Kathiawar, one in the Punjab, one in Chota Nagpur, one in the Gwalior state, and one in the Hyderabad State. By Oct. 1923, all except the last had begun to operate and these six factories between them had an aggregate capacity of 386,000 tons. *This rapid development of the industry naturally led to over-production and to a severe price-war.* The aggregate production increased from 945 tons in 1914 to 236,746 tons in 1924 and the imports in the same period decreased from 165,733 to 124,186 tons. On account of this over-production and rate-war the industry was in parlous straits (1923-25). Most of the new factories were erected within the geographical marketing areas of the existing works and internal competition set up an insensate scramble for business at any price, for delivery over any distance, ignoring entirely the basic principle that cheap and bulky building material like cement cannot

carry heavy distribution and freight charges. The industry was still young and comparatively small and the consumption of Indian cement was about $2\frac{1}{2}$ to 3 lakh tons per annum. This cut-throat competition and price-warfare resulted in tremendous losses (2 to $2\frac{1}{2}$ crores of rupees) to the shareholders. This state of affairs could not go on indefinitely and the year 1924 saw the first step towards cohesion and concerted action, when the survivors of the rate-war joined together in a petition to the Tariff Board for protection against foreign competition and prayed for the grant of a subsidy.

Findings of the Tariff Board: In their memorandum, the manufacturers had demanded the imposition of a specific duty of Rs. 25 a ton, which they thought would prove prohibitive and enable them to capture speedily the whole Indian market. But they were sorely disappointed and found all their hopes shattered in the end. After a searching enquiry, the Board came to the conclusion that the cement industry undoubtedly had great potentialities and merited protection against external competition. It was a key industry and fulfilled all the conditions laid down by the Fiscal Commission. It had abundant raw materials of excellent quality in the deposits of limestone close to the railway lines in various parts of the country, good clay in close proximity to the railway lines again and gypsum. The up-country market was very extensive and protected for the home industry but in Bombay and Calcutta, the chief consuming centres of cement, the long distance of the factories was a great handicap, and the foreign competition was very acute there. The internal factories were at a distance of more than 300 miles from any port. The natural advantages of raw materials are to some extent counteracted by the difficulty of getting fuel from the coal-fields which are situated at long distances from the cement factories. Still the Indian cement equals the best Portland cement imported. The Board found that the main difficulty with the industry was internecine competition in the home market and they condemned it very

strongly. They found that the industry was at a special disadvantage in competition with the foreign supplies in the ports of Bombay and Calcutta because the imported cement was definitely cheaper than the home product. But *the depression was due to over-production and rate-war and prices were determined not by imports but by the internecine competition among the factories.* Therefore, they totally turned down the demand of the manufacturers for a specific duty of Rs. 25 per ton which in their view was much higher than was necessary for the industry. They calculated that the annual consumption of cement in India was only 390,000 tons whereas the factories were capable of supplying a maximum of 600,000 tons. They thought the conditions would become normal within a short period and the protection recommended by them was in the form of bounties on home product sold in the two ports of Bombay and Calcutta. This was to mitigate the disadvantage of the cement factories in their considerable distance from the ports or the coal-fields. Even this measure of relief was made conditional on the industry setting its house in order by regulating agreements and rationalisation of output etc., and on the price of home cement being not reduced below the price of the imported cement. The Government rejected this conditional protection and did not take any action on the report.

The grant of subsidy as suggested by the manufacturers was objected to by the Board on the ground that it would take the form of a proportionate reduction of the freight to the ports for each company and would necessitate the determination for each factory the port or ports to which the scheme would have applied; for unless this was done the public funds would be spent unnecessarily. Moreover, any such scheme almost inevitably involved an artificial limitation of the ability of the firms to compete with each other in certain markets. The Board was of the opinion that whatever bounties were to be given should be at uniform rates for all factories and should be paid only on cement consigned to those areas in which competition

of the imported cement was seriously felt. According to the Board's calculation the fair selling price of home cement in Calcutta was to be Rs. 50 a ton and in Bombay Rs. 57 a ton. The selling price of imported British cement in the ports subject to the then existing duty of Rs. 9 a ton was found to be Rs. 57 a ton. The Board estimated the difference in price, at which the home cement could displace British, to be Rs. 8 a ton in Bombay and Rs. 12 a ton in Calcutta. The Board thought that the object in view would be achieved if the price of imported cement in the ports was raised to Rs. 65 per ton or alternatively if the manufacturers could receive a bounty which enabled them to sell at Rs. 45 a ton in Bombay. The Board considered it desirable that, if possible, the whole of the assistance required should be given in the form of a bounty, the then existing customs duty being converted into a specific protective duty of Rs. 9 a ton. The bounty would be payable only on cement consigned to, and via., the four great ports of Calcutta, Bombay Madras, and Karachi, and their adjacent areas. After making certain deductions the total quantity of cement on which the bounty was payable, was to be 157,000 tons. If the bounties were to be sanctioned for a period of 5 years the Board thought that the quantities of cement affected would be lower during the first two years and larger during the last two owing to the probable increase in consumption. The Board suggested that if the expenditure involved in the scheme were to be considered excessive, then the cost could be limited by restricting the bounty to Rs. 5 a ton and raising the duty to Rs. 12 a ton. But it did not advocate this plan lest it might retard the growth of consumption. The Board also recommended that every factory receiving the bounty should be required to submit half-yearly returns of output and sales to the Government of India and that the quality of the cement might be tested at Government Test House, Alipore, either free or at reduced charges. It did not recommend any scheme for the gradual reduction of the scale of bounties and their eventual abolition. But all the recom-

recommendations of the Board were contingent and were to be inoperative until the condition of the industry was radically changed. Therefore, the Board recommended that in any measure which might be placed before the Legislature, with the object of giving effect to its recommendations, provision should be made that the Act would not come into force until the issue of a notification by the Government of India. Mr. Ginwala did not share the above view. He wanted immediate grant of bounty as from the date when the Bill becomes law, as it would have stimulated the growth of consumption by reducing the price of cement. He, however, proposed that bounties should cease at the end of 2 years unless before the end of that period cement companies were able to satisfy the Government of India that the price of Indian cement in the ports was in such relation to the price of imported cement that the bounty would no longer be passed on to the consumer. Subject to Mr. Ginwala's dissent, as regards the scheme to be adopted, the other recommendations were unanimous. In view of this report, the Government of India decided not to grant any protection and the industry was left to its own resources for setting its house in order.

Corporation for Competition: Being disappointed, the survivors formed an association known as the Indian Cement Manufacturers' Association with a view to fix and regulate selling prices; but each company remained a separate entity with its own selling arrangements. Later on the members of the Association agreed to a levy of 5 as. a ton on all sales to finance a joint "Sales Service" and in 1926 the "Concrete Association of India" was formed for the purpose of educating the public in the use of cement and to provide free technical advice to the consumer. The next step mooted was "The Cement Marketing Company of India Ltd." but the negotiations over this were both delicate and protracted. No member company liked the idea of giving up control over its own sales and of disbanding its selling arrangements. Ultimately an agreement was reached

and the capacity of each works was fixed, the aggregate tonnage being 722,000 tons per annum. The industry recovered gradually from depression and in 1930 through mutual co-operation a state of prosperity was attained, sales were increased and the selling price of cement throughout the whole of the country was reduced by over 25%. Since then the industry has made a rapid and steady progress. In 1930-31 the imports declined to 112,000 tons and in 1936-37 to 51,000 tons; the total output of Portland cement from the factories in the same year was 997,000 tons.

In 1932 the Coimbatore Cement Co. Ltd. was formed mainly by the existing member companies and it added a tonnage of 60,000. The Shababad Co. also joined in 1934 adding a further tonnage of 140,000; this brought the total figure to 922,000 tons for quota calculation purposes. The quota was fixed rigidly but there was nothing in the agreement to prevent any company from modernising or enlarging its plants to any extent it deemed fit. Nominally the inter-company Agreement was to last until 1940.

The above quota system although satisfactory in certain respects militated against economic distribution and it became evident that a complete fusion of manufacture and sales was essential to get still lower prices. Thus in 1935, largely through the efforts of the late Sir F. E. Dinshaw a proposal to merge the manufacturing companies was drawn up and a year later a final scheme was placed before the share holders of ten companies for their approval. The scheme was unanimously accepted and on August 1st 1936 the *Associated Cement Companies Ltd.* was registered in Bombay with an authorised capital of Rs. 8,00,00,000. It was a milestone in the history of this important national industry. According to Sir Dinshaw "The object of the merger will not be to attain a monopolistic position. Its primary object will be to make and deliver cement as cheaply as possible so that it may be able to hold its own against any possible internal competition as well as foreign". The merger

has effected great economies in the working operations of the factories. Including the Sone Valley Co. with whom an amicable working arrangement had been in force for many years, the total productive capacity of the A. C. C. was 14,65,000 tons in 1936. The total sales were 9,81,112 tons with imports at 38,800 or a total consumption of 10,22,912 tons. Thereafter, a cut-throat competition began with the Dalmia Cement and consequently the prices of cement were very much lowered. During the year 1939 two new companies of A. C. C. commenced operations: the one at Rohri with a designed annual capacity of 70,000 tons and the other at Sonajpur in Patiala State. The former is ideally situated to meet the demands of Baluchistan and upper Sind. The A. C. C. also decided to extend its works at Okha.

The Dalmia Cement Limited came into existence in 1936 with an authorised capital of Rs. 500,00,000 but its presence was not felt till 1938. Seth Ram Krishna Dalmia, the real owner of these works intended to establish factories at Daudot, Jind, Karachi, Trichonopoly and Rohtas, but only two factories, one at Karachi and the other at Dehri-On-Sone were manufacturing cement. The Dalmias were able to sell their cement at as low a price as Rs. 25 and the coming of this cement in the market therefore, created a very tough problem of over-production and price-warfare once more. But Seth R.K. Dalmia admitted that it would not be possible to sell at such a low price when extra plant would be installed.

Prospect and Retrospect : During the last 40 years the consumption of Portland cement in India has gone up by leaps and bounds. Between 1900 and 1910 it increased from 43,000 tons to 135,000 tons. In the last two pre-war years cement was being imported at a rate exceeding 180,000 tons a year. But due to shortage of shipping etc. imports fell and Indian factories were established. In the first year after the War a rapid increase in consumption began, and in spite of high prices it increased to 180,000 approximately. During

the next five years the consumption more than doubled and by 1924 the home production and imports together amounted to about 388,000 tons. Since the last War the imports are continually falling and in 1938-39 they reached the low figure of 21 214 tons as against 150,530 tons in 1914 and 118,507 tons in 1920. The important importing countries were the United Kingdom, Japan, Germany, Italy, and Belgium.

The problem today before the industry is of over-production. The total productive capacity of the factories of A. O. C. is over 16,00,000 tons or nearly 30% more than the present total consumption. Dalmins also hope to put an equal quantity on the market when all of their six factories will be working. The remarkable similarity between the present and the period between 1920 and 1923 when also six works were laid down, seems almost of ominous significance. The production index number has risen from 67.4 in 1932-33 to 133.3 in 1937-38. Prices of cement had gone down as low as Rs. 30 per ton in 1938-39 from Rs. 51 and 12 annas in 1929-30. It is really a boon to the consumers and the consumption has increased very rapidly. Due to the present war, the prices have risen somewhat, but not as high as in the last war, when in 1921-22 it is said that the price of imported cement was as high as Rs. 200 a ton and not lower than Rs. 150. But unfortunately the bulk of the home cement at that time was taken by the Munitions Board at first at Rs. 45/8 a ton and subsequently at Rs. 55 a ton. It was of course very hard on the home producers and unjust also.

optimism." The cement industry has no doubt made very rapid strides in its development, yet it is all an ill-considered and ill-planned expansion. This unhealthy state cannot continue for a long time. The industry is in its full swing and requires careful handling and nursing lest there may be a crash and a collapse. Happily the first year of the present war has brought the disappearance of the prolonged rate war which had affected the resources of both the rival concerns. The war has benefited the industry by bringing overseas orders and toning up the prices.

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